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Robert D. Jewett, M.D., Editor.

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BUFFALO LITHIA WATER

Disintegrates and breaks down Urinary Calculi, both the Uric Acid and Phosphatic Formation, and other Varieties as well.

ANALYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

NEW YORK, December 3, 1896.

Dr. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

Dear Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection containing a number of fragments, and also the three boxes, each containing a single Calculus, mentioned in your letter as discharged by different patients while under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of each specimen, and designated them alphabetically.

One of Calculi from collection marked "A" was 9/16 of an inch in diameter, of an orange color, and on section exhibited a nucleus surrounded by nine concentric layers of a crystalline structure. On chemical analysis it was found to consist of **Uric Acid** (colored by organic substances from the urine), with traces of Ammonium Urate and Calcium Oxolate. A fragment of a broken down Calculus from the same collection was found to consist of **Uric Acid.**

One of the fragments taken at random from the collection marked "B" which was still more disintegrated than the preceding one, proved on analysis to be composed chiefly of **Uric Acid** and Ammonium Urate, with a trace of Calcium Oxolate.

The contents of the boxes marked "C" consisted chiefly of whitish Crystalline materials. On microscopic examination they exhibited well defined and prismatic crystals, characteristic of "Triple Phosphate." On chemical analysis they were found to consist of Magnesium and Ammonium Phosphate (triple phosphate), Calcium Phosphate, Calcium Carbonate a trace, Sodium and Potossium Salts in traces, Uric Acid and Urates none, Calcium Oxolate none, Organic debris in considerable quantity, and matters foreign to Calculi.

The fragments of Calculi in the collection marked "D" were numerous, and of sizes varying from small fragments to 7/8 inches in length, 3/16 inches in width and 5/16 inches in thickness. Some of the fragments were white and others were gray in color. On chemical analysis they were found to consist partly of the variety known as "Fusible Calculus," Ammonium and Magnesium Phosphate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in traces, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly spherical in shape, consisting of Crystalline layers from 3/8 to 1/4 of an inch in diameter. They were of a brown color, and on analysis were found to be chiefly Uric Acid, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,

R. OGDEN DOREMUS.

Analyses F, G and H, omitted for lack of space.

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NORTH CAROLINA
MEDICAL JOURNAL.

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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Original Communications.

REPORT ON PATHOLOGY AND MICROSCOPY.*

By J. W. WHITE, M.D., Chairman, Wilkesboro, N. C.

Mr. President and Gentlemen of the Society:

IN the preparation of this report on the Section "Pathology and Microscopy," I have endeavored to collect and compile from the writings of leading authorities on this subject, such reports as will be of greatest interest to us as physicians.

The laborers in this field of our work have been dilligent in their search, and the new lights turned on in the past twelve months have disentangled many perplexing difficulties. The detection and positive identification of the specific pathogenic micro-organisms which are responsible for the many contagious and infectious diseases, have engaged the attention of pathogenists and bacteriologists in all parts of the world. We rejoice to say that in many cases their efforts have met with success far beyond our most sanguine expectations.

With the aid of the microscope and various staining processes many of the organisms may be detected and accurately described. In the last few years the efforts to isolate the cholera vibrion, the bacillus of the bubonic plague and that of yellow fever, have attracted widespread interest, and it is now claimed that the etiological factors in all these diseases have been discovered and fully described. It seems not to be disputed that Dr. Ginsoppe Sanarelii, a native of Arazzo, Italy, has discovered the microbe of yellow fever. Sanarelii himself says that "the

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*Read before the North Carolina Medical Society June 8, 1897.

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microbe of yellow fever splendidly presents, and is the strongest of all the microbes that are known." As soon as this discovery was made, he went to work in the preparation of a serum for its treatment, and has inoculated over 2,000 animals himself. From this extensive work the results were highly encouraging.

The successful efforts of scientists to elucidate some more simple method for the detection of the typhoid fever bacillus, and the discovery of the inhibitory power of blood, or blood serum, from typhoid fever cases upon these typhoid bacilli, have attracted the special attention of clinicians, and have given them abundant reason to believe that we are on the eve of the consummation of these processess; when with them a positive diagnosis of typhoid fever may be made in the earliest stages of the disease, as well as a successful means of prophylaxis through immunizing serum. The micro-organism causing the affection known as typhoid fever was discovered by Eberth, in the year 1880, and has since been known as "Eberth's Bacillus." Under ordinary circumstances the bacillus is small, short and flagellated, with rounded ends. But its age and environments seem to possess wonderful power over its development, as the following statement will show: It is never found in chains, except when grown on potato culture, but when so grown this arrangement is common. Thaimo and Masselin have shown that when grown on bouillon the organism is slender. In width it is large. On potato or agar it is very thick and short. In old gelatine cultures it grows very long flagella. The germs are very actively motile, due probably to the long filaments with which they are provided. This bacillus may be found in water, air, soiled clothing, milk, dust, sewage, urine, blood, etc. Cold has no effect on the organism, several times freezing and thawing leave the germ virile, and capable of setting up its pathogenic work. Sternberg puts the thermal death line at 60° C. The organism is both parasitic and saprophytic, and consequently finds a suitable home under many different conditions of surroundings better than the majority of pathogenic germs. The bacillus will retain its vitality in one to two per cent. solutions of carbolic acid. This was once thought to be characteristic of this micro-organism, but recently it has been discovered that some others share with it in this propensity. Sternberg also claims that the germ retains its vitality nearly six months, when buried in the superficial layers of the soil. McFarland says this organism, and especially its flagella, stain well by the ordinary means, but lose their color entirely when stained by Gram's method. McFarland further states that when organisms are to be stained the best method is to "allow the tissue to remain in Lœffler's alkaline methylene blue for from fifteen minutes to twenty-four hours; then wash in water, dehydrate rapidly in alcohol, clear up in xylol, and mount in Canada balsam."

Læsner has laid down ten characteristics to which the test must conform, in order to be positively identified as typhoid bacilli. They are the following:

1. The appearance of superficial colonies in gelatine plates.
2. Very active motility.
3. The large number of flagella originating from all parts of the bacilli.
4. Discoloration by Grams' method of staining.
5. Growth on media containing grape, milk and cane sugar, without gas formation.
6. Growth on milk without causing its coagulation.
7. Growth in protein containing media without generation of indol.
8. Production of acid when grown in whey, but not in excess of 3 per cent., as tested by one-tenth normal soda solution.
9. Growth on potato.
10. The failure to grow in Massen's normal solution with glycerine.

The chief difficulty in the ready detection of the typhoid bacillus seems to arise from the fact that there are typhoid-like bacilli—according to Flugge, no less than fifteen in number—and he indicates the strong probability of many others under the name of "Bacillus pseudo-typhus," which have not been definitely isolated. According to Germano and Maurea, no less than thirty have been found, some of which, the bacillus coli communis and bacillus fæcolis alkaligines, are constant inhabitants of the intestine, all of which at times respond to the various tests for the typhoid bacilli. Growing in the same manner on the different culture media, clouding bouillon in the same manner, being in the same shape, often having flagella, and sometimes motile, and behaving in so many ways like the typhoid bacilli, that many claim them to be identical. No symptoms running a typical typhoid course have been produced from inoculations in the lower animals with these bacilli. This disease seems to be communicated to the lower animals with difficulty. It has been conclusively shown that if fecal matter containing the bacilli, or even if the pure culture be mixed with the food, and animals so fed for a considerable time, the animals remain unaffected. Nor are they diseased if blood from typhoid fever cases be injected into them, if we are to believe the statements of such men as Gaffky, who "failed to produce any symptoms suggestive of typhoid fever in rabbits, guinea pigs, white rats, mice, pigeons, chickens and calves." Franke and Simon, however, found that when pure cultures are injected into these animals they die, and the bacilli are found in large numbers in the blood of the dead animals.

In the experiments of Chautemesse and Widal the symptoms following the injection of virulent cultures into guinea pigs, were briefly as follows: Very shortly after the inoculation there is a rise of temperature, which continues from one to four hours, and is succeeded by a depression, which continues to the fatal issue. Meteorism and great tenderness of the abdomen are observed.

From a private letter received from Dr. P. H. Hiss, Assistant Bacteriologist of the Health Department of New York City, I take the following: "Animals do not show typical typhoid symptoms, or lesions, from subcutaneous or intra-peritoneal inoculations of either living or dead cultures. The principal symptom from a non-fatal subcutaneous inoculation in animals under our observation is a varying rise of temperature, subsiding within a day or two. In man, I believe only dead cultures have been inoculated. No typical symptoms of typhoid fever were given, i. e., no typical course."

At the autopsy, so say Chautemesse and Widal, a sero-fibrinous, or sero-purulent peritonitis is observed, sometimes hemorrhagic. All of the abdominal viscera, intestine and Pyrés-patches are congested, spleen enlarged, blackish and often hemorrhagic. In cases which are prolonged the liver is discolored. So it seems that we have many discrepancies in the reports as to the results of these inoculations. And as the bacterial analysis is necessarily a long and tedious one, we are driven, for the present at least, to look to other sources for the ready recognition of this micro-organism. Many efforts have been made to produce a culture medium in which only the typhoid bacilli would grow, or in which the growth of this bacillus would be so characteristic as would leave no doubt as to its identity. Many such media have been introduced, and at first with very promising futures, but after further trial have been found unreliable. But the one most recently brought forward, and giving brighter promise than all that have preceded it, is Elsner's acid potato gelatine, which is prepared by adding gelatine to infusion of potato. This is boiled and reduced in acidity. To this is added 1 per cent. of potassium iodide. This medium supports the growth of only two other bacilli—the bacillus coli communis and bacillus fecalis alkaligines. "The bacillus coli grew prolifically, and had the same appearance as when grown on acid media. The typhoid bacilli also grew, but could be readily distinguished after twenty-four hours. With low powers it was scarcely distinguishable. The bacillus fecalis alkaligines is distinguished by having alkaline products, while the typhoid bicillus is an acid-producer. Other bacilli never developed in this media to any extent."

Elsner was able to detect fifteen cases of typhoid fever out of seventeen examinations. But like the bacterial analysis, we cannot wholly rely upon this method of examination. So we turn with still more hope to the discovery of Pfeiffer, Gruber, Durham and Widal, that the blood of typhoid fever cases has a peculiar inhibitory action upon the typhoid bacilli, and that if this blood, or blood serum, be injected in small, but increasing, doses into man or animals, an immunity is produced in the individual against typhoid fever.

Fatal doses of the bacteria, if injected into other animals, will produce no symptoms injected into animals thus immunized. If blood serum, taken from a case of typhoid fever, or from an individual immunized against this disease, be mixed with typhoid bacillus culture and injected into the peritoneal cavity of a non-immunized animal, the animal remains unaffected. So, then, Pfeiffer's tests consist in the mixture of the suspected typhoid bacillus culture with a small quantity of serum obtained from an artificially immunized animal, then injecting the mixture into the peritoneal cavity of a guinea pig. If the suspected culture is the typhoid bacillus culture, it will have been made innocuous by the toxic power of the serum, and no pathogenic effect will be produced. But if the germ be of another species, the toxin will have no power, and the effect produced will be characteristic of the species. This has been found to be a valuable means of diagnosis, but for the fact that it always requires the serum from an artificially immunized animal, and a long and tedious process is necessary to obtain this.

As soon as Pfeiffer demonstrated this power of serum over the bacilli, Widal set to work to make the diagnosis, and so great was his success that we now know it as "Widal's serum test." This consists in taking one part of serum from a suspected case of typhoid fever and mixing it with ten parts of typhoid bacillus culture. Such a culture is naturally cloudy from the diffusion through it of bacilli; but on addition of the serum to the culture, the bacilli are soon thrown down. The supernatant liquid clears away and remains clear, while the bacilli are thrown down in whitish clumps, or flocules. The bacilli are agglutinated, swollen and entirely motionless, and soon undergo solution in many cases. Widal experimented in the following way: He took several bouillon tubes and inoculated some with typhoid bacilli alone, and the other tubes he inoculated with other species of bacilli. He then added to each tube a few drops of serum from an immunized animal. and set the tubes away in an incubator at a temperature of 37° C. In four or five hours the tubes containing the non-typhoid bacilli became somewhat cloudy, but those containing the typhoid bacilli were perfectly clear. At the end of twenty-four hours the non-typhoid tubes became intensely cloudy, but the others remained clear. This test has often been made with the various species of bacilli with almost the same result in every case. It is true that some of the allied species have in a few instances given this reaction, especially the bacillus coli communis. Achard and Bensande found that prolonged exposure to a temperature of 60° C. did not affect the reaction, but that it was considerably diminished at 100° C., and was lost entirely after boiling for fifteen minutes.

To obtain the serum, the method employed is to asepticise the end of the finger, ear or elbow; then make a small puncture, receive the blood and allow it to clot. Then decant the serum from the clot and add it drop by drop to the culture. If the serum is taken from a case of typhoid fever, the reaction begins at once. But if, on the contrary, it is taken from individuals in health, or from persons suffering from diseases other than typhoid fever, the reaction will not occur. That this reaction does occur, and in the manner and way described, is admitted by all, but at what time in the course of the disease this agglutinating property appears in the blood in sufficient quantity to produce the reaction, is by no means settled. By some it is claimed to have been found to exist in such quantity as early as the second day of the disease. If the case be found by further trial to be reliable, Widal's serum test will be of very great practical value in the diagnosis of typhoid fever. But on the other hand, if it is found not to appear in such quantity until the fourth or fifth day, its value will be greatly diminished.

From what can now be ascertained the preponderance of testimony is in favor of its not being found earlier than the sixth day, and by this time usually the symptoms of this disease have so fully developed that a diagnosis may be made.

Biggs and Park, of New York, report 422 analyses made by Widal, Achard, Johnston and others, and make the number of successes 95 per cent. on the first examination.

DISCUSSION.

Dr. Massie being invited to take part in the proceedings said: I am very grateful to the Society for their courtesy, and I appreciate being with you in North Carolina. There has been a great deal written on typhoid fever and especially along the line of blood exrmination. The microscope has come into use within the last ten or fifteen years and has been the means, as you know, of aiding surgery and medicine more than any other thing. The fact that when a man gets up to read a paper now, unless he goes into microscopic work his paper does not have the same amount of interest that it otherwise would demonstrates this advance. Our schools and colleges have established separate chairs for the teaching of microscopic work and the young men as they come up now are much better equipped than they have been heretofore. I do not know that the medical board has a separate chair but the Virginia Board established a separate chair of Histology, Pathology and Bacteriology. I do not know gentlemen that I can add anything to this paper as I have done no special work on typhoid in particular, though I have along other lines.

Dr. Long: If I am correctly informed, microscopic work is connected with our present examining board.

Dr. Duffy: In that paper there is a very useful thought—that of the influence of the typhoid serum upon the typhoid bacillus. It puts me to thinking somehow or other, that in the administration of the coal tar antipyretics we interfere with the power of the blood to manufacture the antitoxin which destroys the bacilli. I merely throw out this suggestion, it may be that in our efforts to cure, we hinder the destruction of the typhoid bacilli.

Dr. O'Hagan: I suppose he means that fever instead of being a destructive process is really a method of liberating and expelling these toxins from the body and should be encouraged.

Dr. Duffy: While my suggestion was that the reduction of temperature by chemicals might prevent the production of antitoxine in the blood, I would certainly be unwilling to make the patient hotter. We have not yet learned the process by which this antitoxin is produced which has the power of destroying the life of the bacilli, but we hope that the aid of the microscope may bring us to the attainment of this knowledge.

Dr. Register: I would like to ask the doctor if the cold water bath would have the same effect on the patient.

Dr. Duffy: In answer I would say by no means. In the first place, it is conceded that the main object in applying cold water is not to cool the patient but for its effect upon the nervous system. Still, if to cool him were the only object, we do not introduce something into his blood which produces chemical changes and reduces the temperature. We do it either by the influence upon the heat forming center by the effect of cold on the peripheral nerves, or by cooling him as we would a piece of iron, and not chemically.

Dr. Register: Dr. Duffy suggested that cooling the fever to a certain point might prolong the fever. I ask if reducing the fever with cold water would not have the same tendency to prolong the fever as cooling with drugs.

Dr. O'Hagan: I belive that the cold bath is universally admitted to be a great success, and that in applying it to the body, it is not for the cooling effect, but the tonic effect on the nervous system. The danger of using coal tar preparations has been pointed out years and years ago, I believe that the danger consists chiefly in its effect upon the process of metabolism. The more advanced physicians have now discontinued the coal tar preparations as of no value in the treatment of febrile diseases. We all know this, that the labors of Pasteur—that greatest of all great men in his particular department—have proved the value of these antitoxic serums. In the production of that serum we are entirely unable to explain the vital process going on. We can know this, that the use of the serum has been attended with very beneficial results. We have not been able to diminish the mortality more than one-half, but I believe that the time is not far off when the serum treatment will be applicable to quite a number of diseases. I can only say, then, that I was very much interested in the Doctor's paper. I am perfectly willing to confess my ignorance of bacteriology, still I bow my head to those who do know something about it and are instructing the older men.

Dr. Poole: I have been using Ehrlich's tests for the diagnosis of typhoid fever through the urine now for four years, and it has not failed me in the four years. Diagnosis by the microscope is very nice and very true, but, as is known, not everybody has a microscope, and not every one is capable of using one if he has it. This diagnosis by Ehrlich's test, as you know, consists of applying a strong solution of sulphanilic acid to an equal amount of urine, and to that add a weak solution of nitrite of sodium, agitate it and add a few drops of aqua ammonia. When this is done the reaction comes at once. If we have typhoid fever, the reaction is such that it must become a blood-red color. The only objection that might be raised is that several other diseases will react just as typhoid fever. Fortunately, they are such diseases as any practitioner ought to be able to differentiate between without any test, such as inflammatory rheumatism and several others. I might add that the test must be applied between the fourth and fourteenth day.

WHEN TO OPERATE.*

By John C. Rodman, M. D. Washington N. C.

THE "When to Operate" in contra-distinction to the "How to Operate," or what to operate upon, shall be the subject of my remarks, and let me assure you gentlemen that it is no easy matter, with the necessarily limited experience of a country physician, to so elucidate these facts and theories, that it will be to you improving as well as interesting.

I shall begin with the following hypothesis, that it is just as important, if not more so in the majority of instances to know "When to Operate," as it is to know "How to Operate". Though the greater number of our text-books assume the case to be one in which only an operation is admissible, they teach us the technique, the mechanical part, and how to avoid the Scylla and Charybdis of our perilous course; yet fail to emphasise with the same care, the equally important question of "When to Operate". This question of "How to Operate" admittedly is necessary and proper as a requisite to our career as successful surgeons. But in the intrest of our patients and our own reputation it behooves us at the same time to prepare ourselves for that all important step of "When to Operate," for the time *when* must be fixed in all operations of election before operative measures begin. And most frequently the correct answer to the question *when*? means a life saved or much pain. That point of time when taken into due consideration has saved many a woman from months of agony and an untimely end in mammary cancer. In this disease, "Time When Operated Upon," controls the prognosis. It is comparatively a simple matter to amputate a breast, though I must confess that in no disease is the old maxim more appropriate "What is worth doing at all is worth doing well" and thoroughly. Though the earlier an operation is performed in this disease, the less is this of vital importance and vice versa. I am happy to to say that there are very few physicians in this enlightened surgical age that do not in this disease advise an early operation and do a thorough one. That there are some who are tardy in this respect is to be deplored. To what degree "Time When Operated Upon," controls the prognosis in mammary cancer is as clearly shown in an article by Professor Frederick S. Dennis before the American Surgical Association some few years ago as in any literature I can find. Not only is this true of mammary cancer but of uterine cancer and all other operable malignant neoplasms. We can readily see, that if the inaccessible glands are involved, and the cells of the growth are scattered in inoperable regions, that no matter how beautifully and skillfully the operation may be performed, it is all for naught, or at best for temporary benefit. While to the contrary, if it is performed at its proper time, viz, in the incipiency of the growth, even if the technique is faulty and the operator not so skillful, we give our patients a good fighting chance for life and health.

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*Read before the North Carolina Medical Society June 8, 1897.

In appendicitis "The When to Operate" if at all, is the absorbing question, before which medical treatment, manner of surgical treatment etc., descend to a secondary place. Certain of our leading lights in the surgical world have said "The When to Operate" should be goverened mainly by pulse, some by pain and tenderness, and others by temperature, and still there are others who viewing the field with a broader and more extended vision have not attempted to formulate any set or fixed rules, by which an operation shall or shall not be performed in every case of appendicitis; but rather do they, and it is with this latter class that I most heartily agree, decide by the clinical phenomena presented in each individual case taken in toto. We see cases that die with and without operative treatment; cases that recover with, when they would have recovered without operation; instances of abscess or gangrenous appendix, early in which, there has been a localized peritonitis and the septic germs are pocketed off, so to speak, nature here having curtained a and sleeping volcano whose rupture may take place at any time, with it almost certain death to the patient. If operative measures are instituted early enough to forestall this outbreak, the chances are that all will be well, but the possession of such diagnostic acumen, to enable us to learn the exact condition of affairs in every case, is the good fortune of but few, if any. Consequently "The When to Operate," is still of the first importance and should be given the gravest consideration, for in many cases the life or death of an individual hinges upon this point of time. The fact that there have been cases in which an operation was advised by physicians, accepted by patients, and in the course of the few hours, in which preparations were being made, the patient's condition improved, and recovery took place from medicinal measures alone, tends to make us temporize and put off operative treatment from one hour to another, hoping against, sometimes, our better judgment, that the good fortune of some others may be ours, but such delay is fraught with danger, for at times the space of an hour is enough to convert what would have been an aseptic operative field, into a diffuse septic peritonitis, with its high mortality rate. Do not understand me to say, that every case of appendicitis should be treated surgically, for cases do recover without the knife, but surgical science has saved many, while delay in operable cases has caused deaths which might have been averted, so we must believe that the "Time When" is the all important point. Some years ago in gangrene, when in operable regions "The When to Operate" was always decided by the line of demarcation and an amputation was deferred until nature fixed the time, but fortunately at this day we are not always so conservative. In a case of rapidly spreading gangrene, with beginning septic intoxication, it becomes a question of dire importance as to whether an amputation should be performed then or when? We know that if our patient dies, he will die from septic intoxication, due to absorption of ptomaines formed by the pathogenic bacilli in the gangrenous parts.

is a simple matter, a mere amputation, but when? is the question. Whether to let our patient run the gauntlet of acute septicæmia, and wait for the line of demarcation which may not come ere death take place, or to take upon ourselves the responsibility and operate then? The question becomes a serious one, as it does in all cases where the future may show, that procrastination has indeed stolen our last chance of success. This is eminently true in acute intestinal obstruction, for heeding to the cry of suffering humanity, we are often tempted to give the anodyne—opium in some form—thereby masking the real condition and giving to the patient that sense of well being, which is so often direful in its deceptions. This disease in its incipiency, is not always so easily diagnosticated for surgical treatment, and may be mistaken for other troubles which recover without operation. Thus we often attempt to relieve by purgatives, high enemas and drugs which have a relaxing effect, and many other things which may suggest themselves to the conscientious physician, who realizing that he may have a serious case to deal with works long in the vain hope of alleviating without an operation, that, which owing to the surroundings and dis-advantages of a country physician, he looks upon with a great deal more gravity, than if it were in a modern hospital. The conclusions that I would draw from these facts, are that there comes a time, when temporizing must end and conservatism ceases to be a virtue. The correct answer to the question "When to Operate" makes the successful surgeon, the great benefactor of his fellow man and a true disciple of the Great Healer.

"THE SURGICAL TREATMENT OF HEMORRHOIDS."

By James M. Parrott, M.D., Kinston, N. C.

IN discussing the surgical treatment of hemorrhoids I shall not go into the history of the various methods of operateing, nor into minute classification or symptomatology, but shall

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*Read before the North Carolina Medical Society June 8, 1897.

endeavor to present a few salient points of practical importance, believing the report of cases illustrating the various operations to be more interesting and instructive than a necessarily dry rehash of the pathology, etiology and symptoms found in our works for reference and text-books on surgery and rectal diseases.

The surgical treatment of an external hemorrhoid is very simple indeed. There is but one operation which, in my opinion, should be followed and that is the old plan of simply incising each and every pile after thoroughly cleansing and cocainising. From one to three minims of a 4 per cent. sol. cocaine is sufficient for each pile. The bleeding is insignificant and no after-treatment is required except packing a tuft of antiseptic cotton into the wound. This readily heals and at no time is the patient inconvenienced by its presence, usually returning to his work a few hours after the operation. A great majority of the cases of external piles when treated by the palliative methods will recover without an operation, only the more chronic or highly inflamed cases requiring surgical treatment.

Externo-internal and internal hemorrhoids are more serious, more difficult to cure and of course necessarily require more skill and attention in their surgical and medical treatment than does the external variety. The palliative treatment for these forms rarely cures permanently, giving in those cases which it benefits at all only temporary relief, nearly every case thus successfully treated recurring when its cause such as hepatic congestion, habitual constipation, etc., returns.

The treatment by the injection of carbolic acid in my opinion cannot be too severely condemned. I once used this method, much against my will, in three cases which I saw consecutively in consultation. In two cases the patients suffered a great deal from pain and hemorrhage and very soon after the inflammation produced had subsided the piles promptly recurred. In the third case an ulcer of the rectum was the result though the piles were destroyed. This injection treatment requires several weeks and is almost certain to be accompanied or followed by one or more of the above complications or by periproctitis, ischio-rectal abscess, phlebitis, hepatic abscess, pyemia, or even by death. I used for each pile the injection of 10-15 min. of solution of

3 parts water, 3 parts glycerin, and one part pure carbolic acid.

I have never seen a case of hemorrhoids which I thought severe enough to justify me in performing Whitehead's operation. It seems to me to be needlessly severe and radical. It must necessarily be accompanied by severe hemorrhage and the attending dangers of suppuration, which is very apt to follow, must not be forgotten. Stricture of the rectum is a frequent resulting complication as are also ulcers, fistula in ano, pyemia and phlebitis.

The ligature method is by far preferable to either Whitehead's operation or the injection and yet it is not without imperfections, and is easily outclassed by either excision or the clamp and cautery. One who has not tried it cannot appreciatehow difficult it is to tie a pile sufficiently skillfully as to cause its safe and sure sloughing. While this sloughing is the real and necessary result which we desire to obtain, it within itself is one particular reason why I so quickly abanboned this method of operation. A great many times the ligature will not slough away, thus necessitating another operation. The after-treatment lasts at least two weeks even in the most favorable case. During the greater part of this time the patient is confined to the bed suffering much pain and inconvenience. The danger from the prolonged exposure to pyogenic germs should be remembered. Stricture and ulcer of the rectum are very frequent results, being much more so than a great many surgeons will admit. The ligature method is far from a sure one and it is embarrasing indeed after going to all the trouble of this operation, its after-treatment and inflicting such pain, danger, inconvenience and expense on our patient, to be confronted as a result not only by an uncured case, but often by the most serious effects in the shape of dangerous complications. In the great majority of cases the ligature method will, however, give a permanent cure, though in a fairly large minority it utterly fails.

Experience has taught me that by far the most reliable and satisfactory method of operating for that class of hemorrhoids, known as the venous externo-internal pile (and this is the most common variety) is the method which might be designated simple excision. The idea was first suggested to me by the incising method of treating simple external or skin piles. Since then I have learned that Allingham had for some time preferred this method. The excision method is very simple indeed. The sphincter is stretched, the lowest pile is caught up with rat-tooth forceps and cut off and any vessels which may bleed are twisted. I usually then, to prevent further hemorrhage, pack the rectum with gauze soaked in diluted Monsel's solution. A simple T bandage with aseptic cotton is applied and the patient is put to bed. The following afternoon, 36 hours after the operation, the dressings are removed, the anus irrigated and aseptic cotton and T bandangė reapplied and the patient is allowed to sit up. Forty-eight hours after the operation the anus and rectum are again irrigated and the patient is discharged after being instructed to use locally a mild carbolized ointment daily for several days.

In a great many cases it is not necessary for the patient to remain in bed more than 24 hours and then the dressings are only applied once. The bowels are allowed to move on the third day, generally, though often on the day following the operation. The after pain from this method is never great and only lasts a day or two. Stricture and ulcers and other serious complications have never followed this method at my hands. Post operative hemorrhage is never even troublesome. This operation is thoroughly cleanly as to after-treatment and requires no special skill in its performance. It is safe, sure and reliable, in my hands curing nicely and promptly several cases on which the ligature method had been tried and failed. In many cases cocaine will be the only anesthetic needed, thus removing the necessity for skilled assistance and extra expense. While I have never had an opportunity to try this method on an arterial pile still I believeif the vessel after the pile is removed is carefully twisted itwould act as nicely as it does in the venous variety. Of course in the capillary hemorrhoid its use is out of the question, Paquelin cautery being then necessary.

In treating high internal piles the clamp and cautery method is preferable to excision. As in all operations for hemorrhoids the patient is instructed after the lower bowels have been thoroughly emptied the previous night to force down the pile by straining over a tub of hot water. The anus and rectum are disinfected and sphincter dilated. The pile is caught and drawn down and the clamp applied (Smith's in my opinion being the best). After cutting off the pile the stump is seared with the Paquelin cautery, an antiseptic dressing applied and patient put to bed. The dressings are changed on the following day and anus and rectum irrigated. An astringent holds the bowels in check until the third day. The patient suffers scarcely any pain except at first act of defecation and resumes his occupation on the 4th or 5th day after the operation. This operation is surer to cure, safer from the dangers of suppuration, is more cleanly and less painful and is no more liable to produce stricture or ulcer than the ligature method. Troublesome hemorrhage is never a complication in the after-treatment of the operation by the clamp and cautery method. The time consumed in the after-treatment by this method is 8 to 10 days less than by the ligature method, thus saving much time for the patient and trouble for the surgeon. The chief disadvantages of this method are that it requires skilled assistance and a special instrument, the clamp, the cautery being a necessary part of any general surgical outfit.

I have selected from among a great many I have operated on by these methods three cases to illustrate the better the various points brought out in my necessarily hurried descriptions.

Case I—Chas. W. age 41 years. Fisherman. When 18 years of age had an attack of malaria fever followed by obstinate constipation and later by hemorrhoids. The piles were for 10 years only troublesome when purgatives were taken. In 1880-8 he had chronic diarrhea for 18 months, during which time the piles greatly enlarged and became very troublesome. One and a half years before I was consulted, the piles were injected with carbolic acid by a rectal specialist. This proved a complete failure. On June 19, 1894, I ligated 7 piles, two being very high up. I used every precaution and tied each pile as skillfully as possible, the rectum was cleansed, an antiseptic dressing applied and patient put to bed. The usual after-treatment was followed. Four days after the operation the patient had a rise of temperature, reaching 103° on the fifth day. This was probably due to suppuration and constipation. The after-treatment occupied 3 weeks, the patient being discharged on the 21st day. Five days later he returned complaining of severe rectal pain. An examination showed that only 3 piles had sloughed away, leaving 4 still securely tied. I then tried the excision method as above described, using cocaine as the anesthetic. The result was perfectly satisfactory, giving no after trouble at all, the patient suffering scarcely any pain and no special inconvenience. On the 2nd day after the excision operation the patient was again discharged. I saw and examined him four months after and found him entirely well in every particular. Two years later I had a letter from him stating that he was in the best of health.

Case II—W. O. Male. Age 31 years. Grocery clerk. Had for years suffered from constipation and attributed piles to straining at stool. When consulted had been troubled by hemorrhoids 3 or 4 months. He readily consented to the operation which I proposed. I used the clamp and cautery method and removed 5 piles. Iodoform gauze was packed into the rectum immediately after the operation and removed on the second day; at this time anus was dressed with aseptic cotton and a T bandage. The patient was given astringents to prevent defecation until the 3 day. Epsam salts was then given and had the desired effect. The first pain of any consequence was experienced during the first act of defecation, and then lasting only a few minutes. Suppuration was very slight causing no inconvenience. Patient made an uneventful recovery and was discharged cured on the 5th day. In this case all the piles were highly situated save one. Chloroform was the anesthetic used. This patient was seen 14 months after the operation and his anus and rectum were normal and healthy.

Case III.—Mr. W., age 39, railroad engineer. When he first consulted me he had had externo-internal piles 6 months. On July 11, 1896, I removed threc piles by excising, using cocaine as the anesthetic. Just before the operation the rectum was well cleansed by enemas and the patient made to strain over a bucket of hot water to force down the piles. A piece of gauze soaked in diluted Monset's solution was packed into the rectum after the operation, and aseptic cotton and a T bandage were applied. These were permanently removed the following day. On the second day after operation patient was up and on the third day he returned to his work, suffering and having suffered no pain nor inconvenience save a slight soreness at the site of the operation. Eleven months after the patient shows a complete and perfectly satisfactory cure.

While ambulance surgeon in the Charity Hospital, New Orleans, I once operated by the excision method on an Italian suffering from strangulated venous externo-internal piles. He was so completely and quickly cured he left the hospital two days later, before I could obtain a history of his case. This operation is a fair sample of the operations of this kind. I have never had any but the most pleasant results from the excision method, case III. being a typical one. In case I. the injection was tried by an expert and failed. Ligation failed. Simple excision was tried and cured promptly and permanently The clamp and cautery have acted nicely in thirteen cases for me, but since I have been using the excision method I have abandoned it altogether, save in high internal venous piles and capillary hemorrhoids. The excision method is much quicker, simpler and easier performed, is safer and in fact more satisfactory in every particular than the clamp and cautery. All in all the excision method is in my opinion much to be preferred to all other methods for the surgical treatment of externo-internal venous hemorrhoids.

"A NEW METHOD OF DEALING WITH INOPERABLE CASES OF CANCEROUS AFFECTIONS OF THE UTERUS, WITH REPORT OF CASE."*

By W. L. Robinson, M.D., Danville, Va., Ex-President of the Medical Society of Virginia.

I THANK you for the honor of this invitation to read a paper before you, the more so because I recognize the ability and advanced thought which has ever characterized your Society. Self indulgence would dictate rest in these salt breezes and I would be more than repaid for my dusty ride by listening to your valuable papers and scientific discussions, but I hold that whatever is in a professional man's life work, that he finds. promises alleviation of human suffering or is helpful to his brethren, should be given honestly and promptly. The good results I have obtained in two cases of that hitherto doomed class, who either suffer hopelessly to the end or sleep from morphine till death liberates them and their friends from distress and agony, impels early publication.

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*Read before the North Carolina Medical Society June 8, 1897.

I have dared brave the criticism "that nothing is proven by the short history of these cases," in the hope that the quickened perceptions and untiring zeal of our profession may evoke something more than the verdict rendered to our past efforts of "Loves labor lost."

The history of these two cases of carcinoma of the uterus, verified by the microscope will be brief and pointed.

Mrs. R., white, of Pittsylvania County, Va., 64 years of age, mother of four children, was referred to me January 10, 1897. She had noticed a slight hemorrhage, alternating with offensive watery discharge from vagina for eight or ten months. Constant pain increasing as night approached which robbed her of sleep, broke down her vital forces, resulting in emaciation and despondency. Vaginal examination reveals an indurated, cupped cervix, excoriated only within the cervix and lower segment of the uterus—the induration extended on the left side to the bony pelvis, with firm peri uterin adhesions fixing the uterus immovably. Micturition painful and frequent.

January 16th aided by Drs. Nelson, Harvie and others, I opened the abdomen supra pubically, ligated the ovarian vessels, severed the broad and round ligaments, then dealt with the uterine artery and sacro-uterine ligaments in like manner, thus relieving the tension which kept up the pain, proven by the fact that she has never suffered any pain, except during the healing of the incision from the day of operation. The incision healed promptly and on the eighth day following the operation I commenced injections of boiled alcohol, which I continued every third or fourth day for two months—the injections were made via the vagina by long needles into the uterine and peri—uterine tissue, commencing with 20 minims, safely increased to 100 at each sitting. Pulse was greatly accelerated, redness of face, full feeling about the head. Considerable pain was caused by the injections in the indurated tissues. Result of two months treatment, cessation of all discharges and odor, pain abolished, insomnia cured, appetite restored, spirits good, irritable bladder relieved and the indurated area much reduced. This condition existed late in April when I last heard from her.

Case 2nd.—Hattie Lovelace, col'd, an intelligent and model patient—37 years old—referred to me December 1896. History of hemorrhage, offensive discharge, pain, emaciation, insomnia and loss of appetite had gradually increased for eleven months. Bladder irritation and rectal pressure annoying. The cervix was gone and a large raw, oozing surface existed—uterus immovable. The necrosed tissue exposed was touched lightly with the thermo-cautery, then operated as in preceeding case, followed by prompt healing of abdominal incision. The relief from pain was prompt so far as tension was a factor. Injections begun on the eighth day and continued as in first case.

This case was septic when she came into hospital. Even temperature, usually 103—pulse 120. The discharge was much slower in yielding than case I. The bladder trouble and rectal pressure disappeared in two months. The area of induration perceptibly diminished. The septic condition baffled my efforts for quite a while—the continued fever and septic diarrhœa were uncontrollable till I gave hypodermic injections of the antistreptococcic serum on 3rd and 4th February. The effect was so prompt that I could not doubt. In forty-eight hours the temperature came down to normal and did not return and in 5 days the diarrhœa had ceased to trouble her. Her vaginal discharge stopped and her husband reported so late as yesterday, June 5th, that there had been no return. She has had occasional disturbances with frequent but painless micturition, lasting only a few days. No return of fever or diarrhœa, appetite fine, condition comfortable, though she has not regained flesh or strength as her general relief would warrant. I omitted to state that I used tannate of alcohol and Methyline Blue as topical applications to the granulated surface with marked benefit in diminishing discharge and producing healthy appearance.

The needles were made to order, 6 inches long and small at the end for introduction into the tissues, but fortified near syringe attachment. There should be a shut off on each needle so as to detach from syringe after injecting the alcohol, thereby preventing the back flow of alcohol following withdrawal of the needle.

You will observe, gentlemen, that in injecting the periphery of the diseased area, I followed the principle advocated by Hasse of Germany, of "inducing scirrhus contraction in the connective tissue, thereby causing fatty degeneration of the metastatic cancer cells in the lymphatics surrounding the tumor." By this method combined with the cutting off the blood supply of the diseased uterus by ligation of the ovarian and uterine arteries, we should reasonably hope for a sclerotic contraction in the interstices and a "fatty regressive metamorphosis in the parachyma of the diseased tumor."

The thoughts I wish to impress are: 1st. That ligation of the uterine and ovarian vessels shut off a large portion of the blood supply in these cases and that severing the broad and sacro-uterine ligaments relieved the pain due to tension; which means freedom from anodyne and its train of evil consequences, restful sleep, good digestion and assimilation—in a word, improved health.

2nd. That the injections of alcohol produce atrophic changes so that the general infection is reduced to a minimum or entirely prevented.

3rd. The happy influence promptly manifested in the septic case by the antistreptococcic serum.

We have all been impressed with the fact that cancerous tumors are much less likely to recur after operation performed before degenerative changes result in breaking down of tissue into pus. Is it then unreasonable to hope that by the methods proposed in this paper we may approximately restore the system to a pre-suppurative stage, inhibit general infection and prolong life in comparative comfort?

I have left bacteriology to be discussed by others and have only attempted in a plain, practical manner to interest you by the description of simple surgical procedure to relieve those who distress every community, who when they pass the operative stage, drift into the hands of quacks, whose only object is deception and gain.

If the suggestions embraced in this short paper shall stimulate any to perfect a method of relief for such cases, I shall feel that my life has not been in vain.

GENERAL DISCUSSION ON SURGICAL PAPERS.

Dr. O'Hagan: I do not know that Dr. Rodman's paper admits of any discussion. When to operate is the great question of surgery, and it has been illustrated by the gentleman and fully proved that of all things in the world, procrastination is most to be guarded against when an operation is contemplated. I know that the Society is indebted to my young friend Dr. Rodman for one of the most logical papers presented on this section.

Dr. Hines: I have had the misfortune in the past 54 years to see five patients die for the want of that good judgment which Dr. Rodman advocated. I had one of my own, and knew that he ought to be operated upon, but consultants objected. I even found pus, and still they refused to endorse the operation, and my man died. I have heard of several who have died for the want of an operation at the proper time, and I commend the paper of Dr. Rodman to the consideration of every gentlemen here. It is important to know when to operate and when not to operate.

Dr. Weaver: The question seems to be, in my mind, how to determine to operate. It has been my good fortune to see Dr. McBurney, the master of surgery in that particular operation for appendicitis, operate, and he himself in one particular instance could not determine when to operate. I remember the case. A young gentleman of fine physique, apparently healthy, came into the hospital. He complained of pain in the iliac region, without any fever, without any nausea, slight constipation, without rise of temperature. Precautionary measures were taken, and he was put to bed with a possible diagnosis of catarrhal appendicitis. That was 11 o'clock in the day. About midnight the doctor was sent for to the hospital. The young man had a sudden rise of temperature, a severe chill, and he then diagnosed appendicitis, brought him before the class that morning, did his admirable operation, cut down on a tumor that had been lately developed, and to the astonishment of the class, he found impacted in the appendix a brass pin, which he took out with some pus. All antiseptic measures were taken, and it was a successful operation; the young man lived, which could not possibly have been the case in the hands of a novice like myself. The point is this, and that is the great desideratum. I have never been able to know exactly where to draw the line when to operate. It has been my observation and practical experience to see many cases in our region die from the honest want of knowledge of when to operate. They might have been saved if we could have made a thorough diagnosis and known when to operate, and when that time does come, it will mark an epoch in the history of appendicitis.

Dr. Hodges: I thank you very much for this invitation. I may have gone to another State, Mr. President, but I am still a North Carolinian, as my Colleague is pleased to style me, and, in Virginia, I am still so accustomed to speak of myself as such, that I am never introduced to a Virginia audience except as a North Carolinian.

I wish to say now, before I discuss this paper, that I have felt prouder of the North Carolina Medical Society in the last few moments than I ever felt before. As I sat and listened to the recent discussion, I was fearful that you were going to pass that resolution and let down the bars and make the Medical Profession a trade instead of what it always has been in this State, a high and honorable calling. I am delighted that the Society has taken the step it has, and I congratulate you upon the fact that the North Carolina Medical Society will still retain its high ethical standard among the Medical Societies of the United States.

Coming to the subject under discussion, I wish very much that some of the older gentlemen present would take up this subject and discuss it from the point of view of their personal and practical experiences, "How to Operate," all of us are supposed to know, but "When to Operate," as I understand it, takes in the whole field of Surgery, and must vary according as there are different diseases, and different disease-conditions present themselves.

In my opinion, it is not so much the special technique of the individual surgeon, as it is the judgment that prompts the operator to undertake a given case. Experience is the safe guide in all theses cases, and upon it depends the best ultimate success.

I believe that, in many instances, Surgery is brought into disrepute because of inexperienced operators attempting every possible operation that the seeming exigencies of the case might demand; moreover, the World, it seems, is about to go wild on this surgery craze; and many reckless operators presume that when a patient falls into their hands that, if every organ and faculty is not exactly normal, that this deviation, however it may be, must be remedied by radical means; oftentimes, indeed, they attempt to revamp the patient as the Almighty never intended him to be, and the results are not always what has been anticipated.

Rightfully used, Surgery is a great boon to the human race; and its success, in my judgment, depends, for the most part, upon when to operate; for there is such a thing as killing people sometimes when there is no necessity for killing them.

In this disease, appendicitis, to which the writer has called attention, the point, when to operate, is still under discussion; and the most able surgeons have not been able to say exactly at what moment, and what class of cases are to be operated upon; most of them, at this time, agree upon an early operation in acute fulminating cases, while in recurring or relapsing cases of appendicitis the rule is to operate during the intervals. It seems, however, that no absolute criterion can be laid down as to the time when to operate, for some of the most serious cases often do not show the usual danger signals, such as high temperature, increased pulse, etc.

I have heard an eminent surgeon in our city say that, to him, the facial expression of the patient is the sure indicator for operative procedure, and often in his experience the suppurating appendix, clasped in the forceps, was the best verification of his judgement.

It seems to be proved by these who have had most experience that early operative measures have saved most patients, but, as I have said before, it is still a vexed question; some operating the minute the disease is diagnosed, others waiting to see if it cannot be cured by palliative and medical means.

In regard to another paper that has been presented, I wish to say a word. I have listened to my friend, Dr. Robinson, with a great deal of pleasure; and I believe he is entitled to credit for the method he has inaugurated, for "by letting down" the uterus you relieve the strain and tension and also cut off in a great measure the blood supply to the diseased organ, thereby being able to treat the disease purely locally. Hass, of Germany has been using these injections of sterilized alcohol into the tissues with great success, but it seems to me that Dr. Robinson, by his method, opens up a point that is worthy of investigation, for, by these means, he is better enabled to bring about trophic changes and a cirrhotic condition of the tissues. This treatment appears to me to be especially applicable in the first stages of carcinoma; but suppose, as many of us do, that we get hold of a case in the later stages of this disease, which, as you know, is the bane and probrium of Medical and Surgical Science; one of those cases, in fact, for which we can do nothing but stand by in mute helplessness and see the poor patient drag out a miserable existence. What simple means can we use to benefit such cases?

I want to tell you of a method which I have used, and to which I give credit to Dr. Betton Massey, of Philadelphia, and it is this: the use of zinc amalgum electrodes applied locally to the cancerous tissues. Within the last six or eight months I have had two cases in the last stages of this disease to come under my care; in one of them, when I inserted the index finger to make an examination, I tore away a piece of the crevix by simply touching it; and, upon further examination, found that the whole anterior wall of the vagina was involved; the patient was suffering, of course, much pain and the usual disgusting odor was present. Realizing that the case was too far advanced for operative interference, I resolved to use amalgam cataphoresis treatment, and with the result that the odor was quickly removed and the pain, except at the time of the application, was diminished to almost a minimum. This case, as well as the other which later came under my observation, both improved as regards their individual comfort, being relieved to a most appreciable extent of their pain, and the accompanying odor.

These applications did not stop the disease, but they brought about an approximately healthy surface for treatment, and on the whole was very satisfactory. What this treatment might do in the incipiency of the disease I do not know, but, in its later stages, it brings comfort to the patient and friends, and robs the disease of many of its last horrors.

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ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

RECIPROCITY IN MEDICAL LICENSURE.

One of the most important questions claiming the attention of the National Confederation of State Boards of Medical Examiners is that relating to reciprocity. That it is a thing greatly to be desired, no one will hesitate to acknowledge, but that the conditions upon which it may be established without prejudice to any State, are very difficult to attain, must also be admitted. This was chosen as the subject of his annual address by DR. WILLIAM WARREN POTTER, President of the Confederation of State Boards of Medical Examiners at its meeting in Philadelphia. He says: Equality of standards for admission to the study and practice of medicine is the only enduring basis on which reciprocity can be established. When the several States adopt a uniform level of preliminaries; a uniform period of collegiate training including uniformity of methods of teaching; and finally, an absolute similarity in the methods of conducting State examinations and granting licenses, then reciprocity will be equitably and permanently established. It is important for the State medical examiners to come to an agreement on these several points that they may act with intelligence on a common platform. The State imposes a post-graduate examination and none should be admitted to it who are not holders of diplomas legally obtained from registered and recognised colleges. It is understood, of course, that there must be established a uniform system of recognising and registering medical schools in the several States.

The remedies lie in legislative enactments. Those who most loudly and persistently demand interstate indorsement aim their criticisms at examining boards; whereas these have nothing to do with the question. The statutes in States that have established licensure prohibit interstate exchange except between such as have equality of standards. The demands of the restless and migratory doctors must be taken to the State legislative halls. Meanwhile, the members of this confederation may assist in bringing the matter to a more speedy conclusion by acquainting their legislatures with the difficulties to be overcome, and by urgently recommending the adoption of such amendments to existing laws as will meet and remove the present defects. Great care must be exercised, however, in the preparation of amendments; the State laws are for the public weal, reciprocity is only for the few. Amendments to existing statutes should be proposed only through State medical examining boards or State medical societies; they are familiar with defects and best know the remedies needed. When legislatures can be persuaded to turn a deaf ear to all amendments that are proposed outside of official sources it will be a happy day for the friends of State license. The object of this discussion is to divert further criticism of the delay of reciprocity into the proper channel. If legislators could be made to appreciate the fact that public health interests are involved in the question of State License; that every attempt to weaken the principle is a blow at public sanitation; and that higher standards of medical education mean better health for the people, then perhaps it would be easier to obtain and maintain the necessary laws to protect the commonweaths against that kind of ignorance, superstition, or super-refinement that always lurks in the environment of quackery.

Reviews and Book Notices.

The Non-Heredity Of Inebriety. By Leslie E. Keely, M. D., LL. D. Paper 360 pages. Scott, Foresman & Co., Chicago. 1897.

In this volume the author has set forth in detail his theory in regard to inebriety. He regards it as a disease that can be readily cured and as not hereditary. The volume is well written and readable, though one may not endorse all of the author's views.

Surgical Hints. For the Surgeon and General Practitioner. By Howard Lilienthal, M. D., Assistant Attending Surgeon to Mt. Sinai Hospital, New York. The International Journal of Surgery Co., New York. 1897.

The hints contained in this little booklet are from the author's personal experience, and will be found very useful. They may be read time and again with much profit.

The Liver of Dyspeptics and Particularly the Cirrhosis Produced by Auto-intoxication of Gastro-intestinal origin (Clinical, Anatomo-pathological, Pathogenic and Experimental Study). By Dr. Emile Boix. Authorized translation from the latest French edition by Paul Richard Brown, Major and Surgeon, U. S. A. Cloth, octavo, 133 pages. G. P. Putnans Sons, New York. 1897

The author believes that cirrhosis of the liver is too generally attributed to the ingestion of alcohol, and that in a large proportion of cases it is caused by auto-infection from the gastro-intestinal canal. He has divided his work into three parts. In the first he presents a general picture of the pathogenic elements concerned—auto-intoxication, the products of fermentation capable of exercising a pathogenic action, and the conditions which favor abnormal fermentation and the production of these poisons. The second part comprises the largest portion of the work and is taken up mainly with the histories of cases of dyspeptic liver. The third part is devoted to a study of experiments with some of the agents suspected as causes of gastro-intestinal fermentation, and the author believes that the results of these experiments will show the legitimate influence which the dyspepsias may claim in the etiology of the cirrhoses of the liver.

Therapeutic Hints.

For Acute Gastric Catarrh.

℞—Bismuthi subnit.	gr. x
Potassi bromidi	gr. xv-xx
Ac. hydrocyanici dil. . .	m. v
Spt. chloroformi	m. x
Mucilag. acaciæ	f. ʒ ii
Aquæ	q.s. ad ℥ i.

M. Sig. To be taken every three or four hours about ten minutes before food.—*Brunton.*

For Intermittent Malarial Fever.

℞—Quiniæ sulph.	gr. xxiv–xlviii
Ac. hydrochlor. dil . . .	ʒ vi–℥ i
Ext. taraxaci fl.	℥ iii
Elix. calisayæ	q.s. ad ℥ vi.

M. Sig. A dessertspoonful after meals in a wineglass of water.—*Dock.*

For the Migrain Accompanying Anemia.—

℞—Ext. cannabis indic	gr. $\frac{1}{6}$
Ac. arseniosi	gr. $\frac{1}{60}$
Ferri pulv.	gr. i.
Ft. Pil. No. 1.	

M. Sig. One pill three times a day, increasing if necessary to two, or even three, pills a day.

Or

℞—Ext. cannabis indic	gr. $\frac{1}{6}$
Pulv. digitalis	gr. ss
Ferri lactalis	gr. ii.
Ft. Pil. No. 1.	

M. Sig. One pill three times a day after meals.—*Med. News.*

Miscellaneous Items.

Dr W. W. Lane, for a number of years Superintendent of the Wilmington City Hospital, was married on the evening of June 23, to Miss Ellen Green. The Journal extends its heartiest good wishes to the happy couple.

Dr. R. J. Goodman, died at Sparks, Georgia, June 16, 1897.

THE SUPREME COURT SUSTAINS THE BOARD OF REGISTRATION IN MEDICINE.—Judge Morton has denied the petition of Dr. Charles Zieman to the Suffolk Supreme Court for a writ of mandamns to compel the Board of Registration in Medicine to issue to him a certificate to authorize him to practise as a physician. Dr. Zieman, who has an office in South Boston, claimed he had practised medicine in this State three years continuously before the act requiring physicians to be registered went into effect, which was in 1894, and was therefore entitled to a certificate without taking an examination. The Board to grant him a certificate upon such premises. The evidende at the hearing failed to establish his claim that he had practised in the State three years before 1894.—*Boston Med. and Surg. Jour.*

ANTITOXIN TO BE TESTED.—The New York Board of Health has decided that hereafter all antitoxin must be tested by the officials of the board before being placed on sale in the State. This is a very important step, as the use of antitoxin as a remedy for diphtheria is growing, and is proving more satisfactory in cases where the antitoxin has been properly prepared and is used with intelligence. The antitoxin sold in the market has been found to be unsatisfactory in some instances, and it is desired that it should be of uniform strength.—*Medical News.*

THE BUBONIC PLAGUE.—The doctors sent to India by the Austrian goverment have reported to the Academy of Sciences at Vienna that neither Professor Yersin's nor Professor Haffkin's serum has been successful in the treatment of cases of bubonic plague. This is entirely at variance with special advices received by the MEDICAL NEWS direct from Professor Yersin through Professor Roux at Paris. It is possible that such an indifinate report may have been inspired by jealousy of the French investigator, or does the diversity of opinion lie in the definition of what constitutes success?

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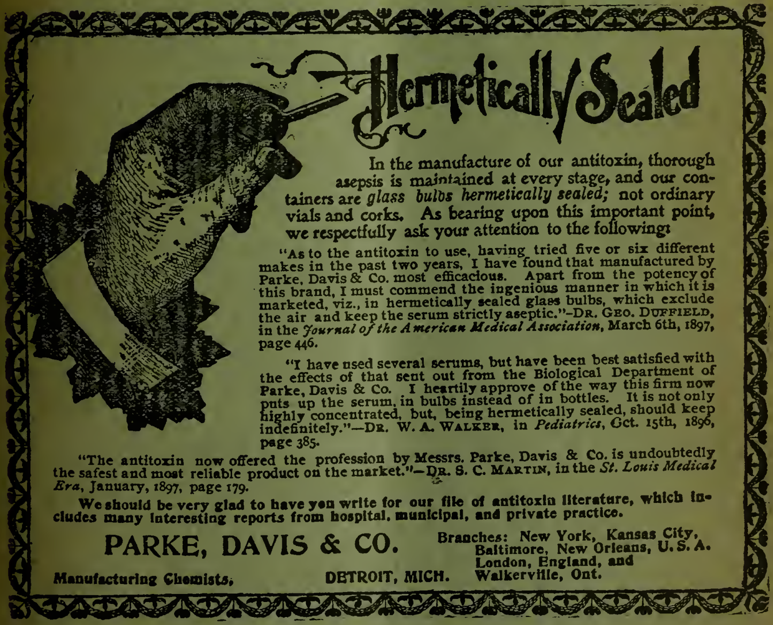
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"I have used several serums, but have been best satisfied with the effects of that sent out from the Biological Department of Parke, Davis & Co. I heartily approve of the way this firm now puts up the serum, in bulbs instead of in bottles. It is not only highly concentrated, but, being hermetically sealed, should keep indefinitely."—DR. W. A. WALKER, in *Pediatrics*, Oct. 15th, 1896, page 385.

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NORTH CAROLINA
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Original Communications.

THE WATER FROM EAST LEAKE LITHIA SPRINGS, (GOOCHLAND COUNTY, VIRGINIA.) SOME REMARKS ON ITS THERAPEUTIC USE.

By W. O. GREEN, M.D., Fellow of the British Gynæcological Society; Member of Societé Francaise d'Electro Therapie; Member of the Consulting Staff to the Louisville City Hospital.

[Written for the North Carolina Medical Journal.]

THE difficulty in making a scientific classification of mineral waters, which will indicate their therapeutic action, has long been recognized by observers, who have given the subject their special attention. Chemistry enables us to determine with precision the character and the quantity of the elements such waters contain, but it may furnish only an imperfect idea of their medicinal value. In fact, a classification based on chemical analysis, may often be confusing and misleading to the practical physician. Nature's process of combining the elements in the various mineral waters, is not yet definitely understood and it still excites wonder and admiration in the scientific mind. Of this, Sir Henry Thompson says: "There is something which I do not pretend to explain and certainly shall not speculate about here, which distinguishes the action of mineral waters from the action of salts which are made by our pharmaceutical processes." By evaporating the ordinary dose of many of the waters of unquestionable merit, the amount of salts obtained will generally be too small to produce an appreciable effect upon the system—rarely a similar effect to that produced by the water. Likewise, similar combinations made in the laboratory, always require much larger doses and, in most instances, cannot be made to have an effect identical with that produced by the natural water.

The water from East Leake Lithia Springs, for the purpose of convenience, may be classified among the alterative diuretic waters. This classification is made from its chief therapeutic action and must therefore be imperfect and not entirely satisfactory. In its chemical composition, it resembles, in many respects, the waters from the Buffalo Lithia Springs, of Virginia, the Estett Chalybeate Springs, of Kentucky, the Stribbling Springs, of Virginia, the Rawley Springs, of Virginia, and the Hot Springs of Arkansas. The chemical analogy of the water from East Leake Lithia Spring, and that from the Hot Springs, Arkansas, is quite striking as may be seen from the following tables:

The samples contained per United States gallon, 231 cubic inches.

EAST LEAKE LITHIA SPRING.		HOT SPRINGS, Garland Co., Ark.	
Magnesium Carbonate	gr. 1.347	Magnesium Carbonate	gr. .128
Calcium "	" 1.528	Calcium "	" 3.968
Sodium Chloride	" .769	Sodium Chloride	" .008
Potassium Sulphate	" .176	Potassium Sulphate	" .232
Sodium Sulphate	" .559	Sodium Sulphate	" .376
Calcium Sulphate	" .484	Calcium Sulphate	" .112
Sodium Iodide	" .0005	Iodine	Trace.
" Bromide	Trace.	Bromin	Trace.
Alumina	gr. .0349	Alumina	gr. .448
Iron Carbonate	" .0676	Iron Sesquioxide	" 104
Silvicic Acid	" 3.0675	Calcium Silicate	" .464
Organic Matter	" .0008	Organic Matter	" .064
Strontium Carbonate	" .010		
Barium Carbonate	" .002		
Manganous Carbonate	" .036		
Zinc, Nickel and Copper	Trace.		
Sodium Phosphate	gr. .0151		
Lithium Chloride	" .075		
Carbon Dioxide, combined,	" 1.378		
Carbon Dioxide, free,	14.3 cubic inches.		

The water under consideration will be seen to differ from that obtained from the Hot Springs in the larger amount of mineral constituents it has in solution, and the addition of several important compounds, notably, lithium chloride and sodium phosphate, together with a richness of carbon dioxide, free and in combination. The practical absence of organic matter presents almost a contrast.

In appearance, the water is bright and sparkling and perfectly clear, except for the crystal bubbles of carbonic acid gas, which adhere to the sides of the glass. It tempts the palate to an extent which makes one partake of it with a relish, while its salutary effect on the mucous membrane of the stomach, induces one to take it freely with a very refreshing sensation. Hence it is, that patients will find no difficulty in drinking it in liberal amounts, when it would require considerable effort to take an equal quantity of plain water. Unlike most waters of its class, there is scarcely a perceptible mineral taste, while the sharp sensation imported to the palate, by the carbonic acid gas—containing according to Delafontaines method of computation 18.2 cubic inches of free gas to the United States gallon—renders it a most delightful table water. When highly charged with carbonic acid gas, it can be made an ideal carbonated beverage and a valuable addition to milk, when it becomes difficult to take on account of its nauseous taste.

With the vast amount of investigation that has been made in the use of mineral waters, in diseases due to the excessive amount of uric acid in the system, the results obtained are very conflicting and do not furnish a scientific basis on which to place their beneficial influence. Most waters which have gained the greatest favor possess, as a rule, small quantities of mineral elements and it is generally believed that their virtues are due to the large quantities which are taken, rather than to any special ingredient which they contain.

The evidence which bears upon the free drinking of water and its powers of "washing the uric acid out of the system" is also conflicting. Kussmanhoff, after a long series of experiments, concludes that taking water in large quantities has no effect, while Genth was able to demonstrate, at least, to his own satisfaction, that "copius drinking of water diminished and finally abolished the excretion of uric acid." Setondorff's investigations led him to the conclusion, that such a course of treatment was followed by no appreciable results.

The water under consideration like all waters of high repute for uric acid troubles, contains small quantities of mineral products. It is also similar to them in its alkaline nature. For its alkalinity, it is dependent mainly upon the amount of lithium, sodium and potassium salts and the carbonates it contains and its therapeutic action is, in many respects, similar to that produced by these drugs as ordinarily administered.

Haig believes that lithium actually diminishes the excretion of urea, which remarkable opinion, he explains by the views of Rose, who points out that, when taken by the mouth, lithium forms a nearly insoluble triple phosphate. Shoemaker tells us that lithium promotes assimilation and metabolism of nitrogenous material and increases the elimination of urea and that in uric acid diathesis the several salts of lithium are used to great advantage, even when chalky deposits exist. Wood, Garrod and Ditterick also hold these views.

Sir William Roberts opposes the use of sodium salts on the grounds that they favor the precipitation of sodium biurate from solutions of water, serum and synovial fluid. In consequence he urges a restriction, in gouty patients, of the amount of sodium chloride taken with the food. With these conclusions from such a careful observer, it is very curious to note that most of the waters, of highest value in the treatment of uric acid troubles, contain a large percentage of sodium chloride.

Of the alkalies in general—including, mainly, the salts of lithium sodium and potassium—it will be observed that here also the opinions of many of the leading authorities conflict. Von Noorden,brings out this point quite clearly. Of this, Garrod says "Thus Clar found a decided increase after their administration; Salkouski noticed an equally decided diminution and Hermann could not find that any influence was exerted by the taking of large quantities of the salts. Excepting the salts of lithium, Haig finds that the alkalies increased the solubility of uric acid and favor its excretion.

With such a variation of opinions and results, it would seem hopeless to search for a scientific foundation on which to place a rational course of treatment either with drugs or mineral water. It becomes, at once, apparent that we can only rely on clinical experience,and ample demonstration is constantly made of the curative effects of many of the waters here and abroad to place this form of treatment on a foundation, which is no longer questionable. It would therefore be neither scientific nor desirable to cease to advise our patients to avail themselves of the inestimable benefits to be obtained from such a course of treatment.

East Leake Lithia water may be found particularly advantageous to patients in whom the uric acid diathesis has been acquired. In a large proportion of these cases, when the water is taken in large quantities and in a methodical way, with the proper exercise, diet and bathing, a cure may be confidently expected. Those patients in whom the diathesis has been inherited—a point brought out recently in a discussion before the Medical Society of London—the functional disease shortly disappears and the patient feels comfortable. As with all other forms of treatment, little more can be expected. The system only awaits some great demand, either mental or physical, on its vitality to bring about some of the many phenomena common to the presence of excessive amounts of uric acid.

Bremer, who has given much time in recent years to the investigation of diabetes melitus, says in his conclusions that: "There is a substance, at present unknown, which occurs in the blood corpuscles, foreign to these bodies in their physiological state." "It is not the presence of the excess of sugar in the blood, which causes the clinical symptoms of diabetes, but it is with greater probability, the foreign element alluded to, which, combined with the white (necrotic) masses, resulting from the decay of the corpuscular element of the diabetic blood, makes the clinical symptoms and is probably the auto-pathogenic substance of the disease."

In the treatment of diabetes, Niemeyer holds, that the only medicines, whose beneficial action can be claimed with certainty, are the alkaline carbonates and the experience of Greisinger verifies the distinct improvement which may proceed from the exhibition of these remedies. The well established success of some of the alkaline carbonated waters of Europe probably have shown the most marked results obtained in the treatment of this disease. The reputation of some of these waters has been admirably upheld by the observations of Seegan, of Carlsbad.

The good results, which may be obtained from East Leake Lithia water, in the treatment of diabetis, are probably due to its powers of neutralizing or eliminating the unknown substance, mentioned by Bremer. Certain it is that the water possesses a large amount of alkaline carbonates—the salts on which Niemeyer places chief dependence—and its judicious use offers a most valuable aid to more perfect assimilation, while it goes far in dissolving and carrying off the pathogenic products. Whether we regard the disease as the effect of excessive formation, defective assimilation, modified innervation or the presence of the unknown substance already pointed out, the results are the same, as the indications are met in each condition.

With the proper dieting, fasting and several weeks course of the water either singly or combined—as the case may require—with such drugs as antipyrine, codeine, calomel, benzosol and carbonate of ammonia, the quantity of sugar excreted may be expected, in many cases, to diminish or entirely disappear, with a gain in weight, an abatement of the thirst and hunger and a relative diminution in the amount of fluid eliminated.

It is doubtful whether any form of treatment will cut short an attack of acute rheumatism, though much can be done to render the patient more comfortable. Should we consider the disease as due to lactic acid, or of an infectious nature from the presence of a germ or of malarial origin, it is probable that, in the acute stage especially, the system is permeated with certain organic poisons, which it is desirable to eliminate. It would be advantageous to employ the water under consideration not only in the acute stage, but after the disappearance of the enlargement and excessive tenderness of the joints. The entire system becomes flushed by large draughts of the water and the disturbing morbific products are rapidly eliminated.

The most marked effects may be expected in the subacute form, where the irritability is allayed and the heat and pain in the joints, lessened. Here the attack in many instances may be cut short. It could not be expected, however, that all cases of this kind will be relieved or even benefited, for it sometimes happens that individual idiosincrasies will assert themselves and cause the disease to resist the most carefully planned scientific treatment.

In the chronic, as well as in the subacute forms, the good derived from the alterative, tonic action of the water may be taken into account as a factor of much consideration. A glance at the analysis, will suggest to what components these virtues may be attributed.

The water may likewise be employed with beneficial results in rheumatic gout, gouty dyspepsia, lumbago and sciatica. Its salutary effects in these conditions may be explained in the same way as pointed out in rheumatism.

In Bright's disease, the good results to be expected from the exhibition of this water seem at once apparent. These may be based on its beneficial influence over the digestive function, its power of promoting the elimination of urea, its tendency to increase the red blood cells, and, when taken in large quantities, its power to reduce the hyperplastic condition of the blood and increase the blood pressure in the glomeruli. The latter condition, by increasing the amount of liquid excreted, has the tendency to wash the obstructing accumulations from the tubuli. As a general rule, it may be said that the quantity of excretion is increased in proportion to the extent and degree of parenchimatous changes and the increased arterial pressure.

Of the use of mineral waters, in acute Bright's disease, Neimeyer tells us, that those "waters containing carbonic acid are the most suitable beverage. We should not be too sparing in their administration, as the increased pressure in the glomeruli and the augmented transudation may assist in washing away the obstructing clots. On the other hand, drastic diuretics are contraindicated, owing to the inflamed condition of the kidney."

In chronic nephritis, the water will be found useful in the interstitial form. In the incurable cases of this variety of the disease, its continued employment, together with the usual routine treatment, may hold out for the patient comfort for a number of years; as long as the secondary lesions do not appear, the digestion remains good and there is a moderate amount of exudation.

In scarlet fever and where there is a tendency to eliminate albumen, even in dropsical effusions, as well as in impending attacks of puerperal convulsions, very salutary results, from the employment of East Leake Lithia water, may be confidently expected. The same may also be said of renal congestion, the nervous phenomena complicating Bright's disease, lithaemia, rhenal colic, and cystic troubles, whether acute or chronic.

The present length of this paper forbids a consideration of other maladies in which this excellent water may be effectively employed. However, the more important of these may be mentioned. In its tonic properties, it resembles, in many respects, the hypophosphites. It would therefore be indicated in nervous dyspepsia, neurasthenia, cerebral and physical exhaustion, convalescence from various prolonged acute diseases, chlorosis, anæmia, neuralgia and scrofulous and rhachitic affections.

A study of the analysis will, at once, suggest its usefulness in gastro-intestinal and many of the functional and organic liver affections.

In conclusion, attention is called to one point concerning the employment of the water in the form of baths. In the "Journal de Clinique et de Therapeutique Infantatis" 8th August 1895, appears an abstract of an article from the pen of Josset, which was published in the "Somaine Medicale." The writer deals with sulphur baths in the treatment of whooping cough. He employed highly sulphurous water for fifteen years with uniformly favorable results. Potassium sulphide was used in plain water, varying in amounts, according to the age of the patient, from half an ounce of the polysulphide, to ten quarts of water, in a child one year old, to two ounces, to forty-five quarts, in a child eight to ten years of age. The temperature ranged from 96°F. to 98°F. and the time of the bath varied from twenty-five to forty-five minutes. The baths were taken daily and the maximum time required, to effect a cure, did not exceed two weeks. The substitution of the East Leake, for the plain water may be expected to enhance the value of the treatment and shorten the time of observation.

With the desire not to over estimate the virtues of the water, under consideration, many of the conditions in which it may be of value have purposely been omitted. As "good wine needs bust," the writer has ventured to put forward these few remarks, feeling justified in the belief, that East Leake Lithia water desires to be more widely known than it is at present. And it is hoped that what has been said, may attract the attention of the thinking medical public, that more extended scientific research may be made, not only to verify the truth of what has already been suggested, but to find a more extended range of usefulness for this excellent water.

Louisville, Kty.

AN ITEM ON CAUSATION AND PREVENTION OF DISEASES OF WOMEN.*

By J. Steven Brown, M. D. Salisbury, N. C.

DEEPER than we are prone to look we must search for many causes of disease.

By making us lead lives distorted and empty because of our imbecile subservience to the habits of society; by making us follow injurious fashions in dress; by forcing upon us unsuitable or unhealthy food and often at unreasonable hours; by innumerable artificial and superficial rulings, present American Society demands many a blow at good health and genuine happiness. Errors in diet are often committed from ignorance or impecunity or, forsooth, because the artificial guest is more willing to sin against him who created her and gave her a body to account for than to run the risk of offending her hostess by a seeming lack of appreciation.

A load of skirts are hung from the compressed waist and the wearer seems not to know why she is tired and full of aches. She cramps her lungs, her bowels and her feet in the vain Chinese hope of improving on the shape and size given these organs by their creator.

Forced mental training often saps the vitality of the budding woman and seriously disturbs her physical development.

Just as in the days of our grandmothers and their predecessors those who are unfit for motherhood because of youth or age or hereditable disease still marry and are given in marriage. To many who are physically well qualified maternity has become a burden instead of a joy, and hundreds of invalids must refer the beginning of their invalidism to criminal aborton done for the sake of avoiding pain and care and for enjoying the socalled sweets of society. These and many like causes demand proper preventive treatment. But they are not the cause that most urgently call for removal.

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*Read before the North Carolina Medical Society June 8, 1897.

Statistics are not sufficiently abundant, complete and unprejudiced to make them of much value. Still I venture the statement that specific vaginitis and its extentions cause more trouble than any other pelvic inflammations. And yet while the prostitute claims these inflammations as her rightful inheritance, she can by no means claim a monopoly on them. Thousands of thoroughly virtuous women are daily called upon to help reap the wild oats of their husbands; and thousands of these husbands are called virtuous men.

An acient philosopher says that virtue is summed up in a knowledge of good. He who knows what is good will do good. Evil arises from ignorance. Men are immoral because they are not sure that their acts are wrong.

While we may not fully agree with Socrates it is quite probable that if men and women and boys knew more about these matters, and the suffering that follows and spreads from improper sexual indulgence a healthful wave of reform would sweep over our land and purify our murky atmosphere.

Unmarried men need to know that sexual indulgence is not at all necessary for their health and vigor and the maintenance of their virility. They need to know, and many of them do realize sadly, that it is not an essential factor in happiness, but always shows unhappiness as a part of its product. They need to know that occosional emissions are not inconsistent with good health. They need to know that gonorrhoea and its congeners are not cured half so easily as they are contracted, and that often when these diseases are not apparent, they are still latent and may remain so for months and years. They need to know that hosts of women are victimized and made chronic sufferers because of these latent cases in their reformed husbands. Men need to know that sensualism saps both mind and body. They need to know that impurity of thought and deed dulls and de-bases man's ideas and converts the glory of life into a miserable existence with no higher joys than fast vanishing sensual pleasures. They need to know that the good Book which gives so many instances of impurity among the chosen children never commends that impurity, but always condemns it and commands us to abstain from it.

To recapitulate: 1. One great crying *disease* among women is *Specific Inflammation* of the pelvic organs and tissues.

2. Its *cause* is impure intercourse.

3. *Prevention* is best secured by a reform in morality.

4. *Our Duty* as physicians is to tell the people plainly that prostitution and its kindred evils debase the mind, debauch the body and constantly curse and degrade the human race, the noblest of all things created.

THE IDEAL ANTIPYRETIC.*

By E. G. Goodman, M. D. El Paso, N. C.

IN the discharge of the duty imposed on me as Chairman of the Section on Materia Medica and Therapeutics, I shall not essay on the enumerations of the many additions to the materia medica, with an epitome of the literature on the same.

Such a procedure would be prolix, and devoid of interest to those who have kept abreast with the current literature of the subject.

The field of experimental research for every observer is necessarily limited, and the period of a few months is far too short to demonstrate the true merit of a valuable remedy, or to relegate a worthless one to the shades of oblivion.

The conscientious practitioner is accustomed to regard with skepticism the extravagant claims of excellence made in behalf of every new remedy by those who are accustomed to bow at the shrine of novelty, and worship at the altar never graced by genius.

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*Read before the North Carolina Medical Society June 3, 1897.

Medical literature is teeming with wordy productions which represent only the gush of enthusiasm inspired by every innovation which offers a transient gleam of hope for the success in the conflict with disease. These productions of the pen, laudatory of the improved virtues of some medicament, are often based upon the imperfectly observed results obtained by the administration of a sample package gratuitously distributed by the manufacturer.

Before a therapeutic remedy can receive the stamp of permant utility, it must be thoroughly tried in the crucible of clinical investigation based on scientific principles; for a few favorable results attending the use of a certain kind or method of medication may be coincident with the recuperative energy of nature, and not due to the means employed.

In asking your attention to the consideration of the subject selected, it may not be unecessary for me to preface further remarks with the statement that "the ideal antipyretic" is a hypothetical substance and not an actual entity.

We have not yet reached that stage of perfection in which the materia medica is enriched with a remedy that measures up to the ideal treatment of pyrexia, though such an attainment is a "consummation devoutly to be wished."

In recent years the labors of the synthetical chemist have been rewarded with no more brilliant results than the production of that class of drugs known as antipyretics. Others, indeed, having been announced to the world by some of the master minds of medical science, have enjoyed a short lived notoriety due to the expectation of usefulness inspired by the prestige of these great names.

The old-time conception of the conservative nature of pyrexia as being a manifestation of the reaction of the human organism against pathogenic germs, and therefore eliminative, has led many to depreciate the use of antiypretics and to assign them to a place of secondary importance in the treatment of disease.

Such a conception is too vague and speculative to be entitled to serious consideration. However ingenious the hypothesis;

however plausible the theory; and however illustrious may be the names of the advocates of such theory; yet, the accumulated evidence of clinical experience stamps it with an emphatic negative.

The field of therapeusis almost entirely is circumscribed to symptomatic treatment. To reduce temperature ;to relieve pain; to regulate disturbance of the circulatory apparatus; to sedate an excited nervous system or to stimulate the same when depressed; to check or neutralize abnormal discharges; to stimulate the glandular organs to normal activity; and to nourish the patient with suitable aliment;—these are indications for the exercise of every therapeutic resource at command.

It is a lamentable commentary on the boasted achievements in medicine that, at this late day, we know of no remedy entitled to be called a specific, if we except the action of quinine on the hæmatozoon of malaria and the influence of mercury on syphilis.

Ever since the search-light of modern science has revealed a hitherto unknown world of living organisms as the potent cause of many of the ills of human flesh, it has been the cherished object of therapeutists to take the shortest route to success by administering the death dealing portion directly to the invisible causative agent of disease.

However laudable the object in view, the means for its attainment are unknown, save in two exceptions noted above; and, until such remedies are found, therapeutic skill finds its legitimate exercise in combatting symptoms as they arise, and in aiding nature to resist the inroads of disease.

Of all the symptoms that manifest the presence of disease, there is none more often encountered, and none more deleterious in its effects on the human organism than pyrexia.

However imperfectly understood may be its cause, whether due to the action of the product of pathogenic organism on the thermic centers, or some other cause equally obscure, its results are such as to remove the "flattering unction" that it is a conservative process rather than a pathological element that decimates the human family by its own destructive influence.

Beginning as a symptom it soon becomes the initiation of a series of morbid phenomena more wide reaching and destructive than those which properly characterize the primary cause.

When we consider the almost uniform temperature of the human organism, and the narrow limits of variation compatible with life, we read the handwriting of nature in legible characters dictating the course to be pursued when the temperature departs from normal.

Bacteriologists have abundantly proved that the lowest forms of life are far more resistant to the action of heat than is the highly complex and delicately formed structure of the human body. With this fact established beyond all cavil, we are forced to the conclusion that fever is conservative to the human body in the same way that the sword of Hamlet was conservative to the body of Polonius when it made of him a supper for "convocation of politic worms."

The injurions effects of fever are clearly manifested to the most casual observer in the sick room, and are demonstrated by the pathologist on the post-mortem table. It is itself a toxic agent, perverting the function of every organ, and acting destructively on every tissue; and, if long continued, needs but to pass very narrow limits to effect the dissolution of the body with a certainty and rapidity that shame the tardy action of the much dreaded bacteria.

The constant attendance on pyrexia of such symptoms as restlessness, jactitations, delirium, hebitude of mind, convulsions and coma, and the rapid subsidence of these symptoms on abstraction of the excess of heat, would plainly indicate that, whatever may be the source and cause of disease, pyrexia as a disturbing element is second to none.

Parenchymatous degenerations of muscular tissue is a constant accompaniment of, and often dependent on pyrexia, and increases with increment of temperature. No muscles participate in the degenerative process more than does the heart, and in fevers long continued, this becomes a source of trouble that baffles the skill of the physician, and often consigns the patient to an untimely grave.

The role which fever plays as a factor in disease is well illustrated by the phenomenal reduction of mortality in enteric fever by the cold-bath treatment.

Here, obviously, no fine-spun theories of germicidal action can share the glories of the triumph which therapeutics wins over disease. The good accomplished, apart from the invigorating influence on ths nervous system, depends on keeping the body at or near that temperature which nature ordained as the most suitable for its growth and perfection, for the healthy performance of its functions, and as the greatest safe-guard against microbic invasion amid the ever-recurring vicissitudes of climate.

Ever since the time of Galen the utility of the external application of cold to counteract the dire influence of fever challenged the consideration of the profession until its efficacy was demonstrated to the world and stamped with tne seal of permanence by the labors of that benefactor of humanity whose name is synonymous with the cold-bath treatment.

Antipyresis is a therapeutic resourse that has passed beyond the stage of experimental uncertainty, and verifies its claim to preferment by the great percentage of human lives that have received a new lease of existance under its benign influence.

That we have antipyretics prompt and certain is a fact too well known to need confirmatory comment; but the property on which their value depends is so intimately blended with others of a dissimilar nature as to restrict their usefulness at a time when their use is imperatively demanded.

Without the aid of prophetic inspiration to penetrate the veil of futurity, with the experience of the past and the light of the present, we may rationally conclude that the time is not far distant when there will be given to the profession a drug that will effectually reduce temperature, without any disorganizing influence on the circulating fluids, and without causing dangerous depression and collapse of the vital powers.

Such a remedy will not be a panacea, but it will be the ideal antipyretic.

Whether it exists ready formed by the vital activity of living vegetable cells to be revealed by the analyst, or whether it will be evolved from the complex problems of synthetic chemistry, he who first demonstrates to the world its true value will mark a new milepost in medical progress, and will have his name perpetually engraved on the imperishable tablet of humanity's gratitude along with the name of the discoverer of general anæsthesia.

THE KEYSTONE OF THE MEDICAL ARCH.*

By T. S. McMullan, M. D., Hertford, N. C.

THE rule usually followed by chairmen of sections I shall in some measure break. The purpose being to offer to your minds some suggestions why practitioners of medicine should have a more accurate knowledge of physiology than generally obtains, rather than to present an array of facts which most of us have had an opportunity of knowing whether we have availed ourselves of it or not.

In Physiology few facts of importance have been established.

Blood and Circulation.—An investigation by Lilienfeld has shown that the nuclei of Leucocytes and Lymphocytes contain a compound Neucleohiston, formed itself of two substances, which contributes largely to the coagulaton of blood.

When studying the effects of bleeding, Jona has deduced that the alkalinity of the plasma is at its maximum reduction in two hours and returns to its normal in about twenty four hours; and that'about the seventh day after a hemorrhage the greatest activity is seen in the spleen and red marrow.

Experiments have shown that gravity is a cardinal factor in dealing with the circulation; and that in man the equilibrium is maintained by the splanchnic vasomotors. Consequently when this compensation has been destroyed or injured, position is important.

Mosso has described a sphygmonometer for determining blood pressue which promises to be practical and convenient for the general practitioner.

That an increased flow of blood through the muscles takes place during and after massage has been clearly proven.

Respiratian.—That blood from an asphyxiated animal has more toxic properties than normal blood hasbeen shown.

Nutrition.—It has been demonstrated that glycolysis (or distruction of grape sugar) is not dependent upon the presence of the fibrin factors as originally supposed but is a function of the formed elements of the blood and is an act of oxidation.

Corvallo has proved that in some of the lower animals perfect digestion takes place, even when the stomach is removed.

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Ductless Glands.—It has been made positive that the spleen is connected with the formation of red blood corpuscles, and that its removal in old people is attended by a very marked anæmia.

Oliver and Schafer contend that the supra-renal capsules contain a principle which aids in maintaining tone in the different kinds of muscular tissue; and that their removal causes general muscular weakness and vaso motor disturbance.

Central Nervous System.—It has been shown that the temperature of the brain can be raised 2 to 3 degrees above that of the blood by stimulation and excitement.

Mosso states that sleep is entirely a chemical phenomenon as the circulation can not become modified to any great extent before we can awake and think; thus contending that anæmia of the brain cannot be the cause but is only an incident.

It has been shown that a median vertical section of the cerebellum gives no results. So that it is plain that its functional connections are on the same side of the body; removal of either side causing marked incordination.

The only reference I shall make to chemistry here, Mr. President, is to call your attention to the almost countless numbers of new remedies evolved from the laboratories of the world, and to present a few tests to be used in urinalysis which have seemed to me worthy of remembrance and use.

Ott advises the use of sulphosalicylic acid in testing for albumen; added either in crystals or in (30) thirty per cent solution it produces a cloudiness, even if the smallest amount be present.

Carres recommends the use of Resorcin as a reagent to determine the presence of albuminuria; both of these tests have been found to be more accurate than the ones heretofore in general use.

In regard to the qualitative tests for sugar, after using all that I have seen proposed, none have seemed so satisfactory in ordinary practice as Trommers or Fehling's and for quantitative analysis Whitney's is the most useful and practical.

The volumetric or Whitney's test is—a solution of amm. cupric sulphate of which one drachm is decolorized by $\frac{1}{30}$ gram of glucose. The urine added drop by drop upon boiling will, if sugar be present, decolorize the solution and by a carefully arranged table the quantity can be estimated.

I have been content, Mr. President, merely to enumerate some of the more practical advances during the past current year, and I shall leave to your leisure and your inclination the task of elaborating and to your research and knowledge the preference of believing or rejecting them.

The history of medicine began, Gentlemen of the Society, when Egypt was the queen of civilization; for we find it recorded in the book of Moses that the priests exercised the art of healing, and so attempted to solve the two greatest problems given to man since the world began; the salvation of the soul and the cure of the body.

The art was introduced into Greece by Chiron, and Hippocrates formulated the first system of treatment; that based only upon false deductions and dogmatic teachings. And so on down the ages certain medicines were given for certain diseases, not that their actions were understood, but because they had been supposed to have cured others; they had in those days scientists and teachers, but yet they were alike,

"The bookful blockhead, ignorantly read,
With loads of learned lumber in his head."

and medicine only began to be put upon a rational basis when in 1628 the discovery of the circulation of blood was given to the world.

It is said that great events occur in clusters; that the greatest minds shine together. It was during the great upheavals in England in the 16th century, amid the clamors of the people, when brother was arrayed against brother, when the church hurled its anathemas at the Puritans and the Puritans their denunciations against the church; when events arose, which terminated in the din of arms, that at Marston Moor shook the house of Stuart from the throne, that the great fact was given out that there were not four humors, as Galenhad taught, but that there was one the "Elixir of Life". This discovery of a physiological fact has revolutionized the practice of medicine and has made the name of Harvey immortal. From thenuntilnow, upon the researches made by physiologists hangs our ability too medicate. It is the keystone of the medical arch; the bed rock of our therapeusis, the knowledge of which has been the power which more than any other has driven out from civilization the heinous practices and belief in witchraft; and will be the power which more than any other in the days to come, as the laity becomes more familiar with the intricate and beautiful economy of man's make up, and learns to know that it is safe only under the guidance of one versed in these things, will sweep away all quackery and charlatanism. I should like to plead right here for a more urgent insistance by our physicians upon the importance of having our children instructed in this branch; it is essentially that science which belongs to both laymen and professional, the knowledge of its more exact details is for those, whose duty is to direct in their proper channel all those bodily functions which have gone astray; but its aquaintance with all men leads them to a heightened opinion of themselves and a more profound reverence for that mighty power to whom they owe their being.

Chemistry is the closely allied sister of physiology. The human body is one great intricate laboratory and life one series of chemical changes. New tissues are being formed and old ones, which have served their purpose and which for a time have made the cycle of life revolve are cast away. Upon these and upon the direction of these in the grooves marked out for them by the hand of omnipotenc hangs our hope of living in this world.

Mr. President, I trust I am free from cant when I say, that I do not believe that the author of this world will hold any man guiltless, who, with no knowledge of his handiwork and with only the purpose to impose himself upon unsuspecting sufferers for the sake of gain dares meddle with the health of His creatures, made in His image and into whom He breathed the breatn of life. No man at the present day can render as his excuse a lack of opportunity to know; if no other means presented the easy access which we have to the current medical journals would enable all of us to learn. Those of the profession in this state, who have their heart in the work of healing, should see to it that the people, so far as they can help it, shall not be made the victims of wilful neglect and preventable unfitness.

We have not yet reached the culmination of physiological research.

The day is coming when all of us will be able to have a nearer and better view of his and his fellowman's makeup;but because we see not the end let us not have less faith in our art, but require ourselves to see if, even in our limited fields we may not discern something which will add to man's hope of living.

The great in war have their monuments; the great in peace their honors; and the great in verse have had woven about their memories chaplets of praise wrought from their own sweet songs. But meagre has been the homage paid to keep fragrant the memory, and to keep green the graves of that army of men who have toiled and delved, that they might make, not themselves great, but us more able to cope with that enemy which was thrust upon us when Adam fell. Mr. President I have great faith in the future of our art, and I believe that the day has dawned which will give to the laborers in physiological science their meed of praise. And as the day grows older and the "Science of Life" more exact, we will hear the voice of the people say (except the great Arch enemy) "Medicine is King, Long Live the King".

MENSTRUAL DISORDERS.*

By Annie L. Alexander, M.D., Charlotte, N. C.

MENSTRUATION is a physiological process and should be absolutely painless. To say that 90 per cent. of women suffer from some form of menstrual disorder would not be putting the per cent. too high. That this is true may be attributed, in many cases, to the so-called "higher civilization." Menstrual disorders, strictly speaking, can not be said to be a disease, but symptomatic of some other disease.

The most frequent disorders of menstruation with which we have to deal are: Dysmenorrhœa, amenorrhœa, menorrhagia and metrorrhagia, and the irregularities dependent upon the menopause.

Dysmenorrhœa is the most frequent of these disorders that I am called upon to treat. The disturbance may be so slight as to scarcely call for professional aid to relieve, or again the pain is so intense as to throw the unfortunate woman into convulsions. Many women are miserable for one week out of every four, frequently spending the time in bed.

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Ovarian and periuterine disease frequently complicates menstruation but where the pain is due to diseased tubes, ovaries and periuterine disease, it is not dysmenorrhœa. Women with periuterine disease frequently have increased pain at the menstrual epoch, especially when they are up and about; this is due to the accompanying congestion and the influence of gravity, and not to the flow.

The menstrual flow, as is well known, is caused by changes that take place in the lining membrane of the uterus, and the pain that ensues is due to an inflamed or hyperæsthetic and indurated condition of the endometrium at or near the internal os, with more or less obstruction due to the induration, or flexion perhaps, at this point. In such cases the passage of the sound will cause the same aching pain felt during the menstruation. The hyperæsthesia and indurated condition of the tissues so often found in cases of dysmenorrhœa is frequently the result of imperfect development and atrophy.

Flexions and displacements of the uterus do not of themselves cause dysmenorrhœa. I have seen a few cases of flexions so marked that it was almost impossible to pass a sound free from dysmenorrhœa. The majority of cases of flexion have dysmenorrhœa because of an accompanying hyperæsthesia. Dilate the cervix, cure the hyperæsthesia and the dysmenorrhœa disappears although the flexion remains. When the stem pessary is used, it not only relieves the dysmenorrhœa but straightens the canal and a change is brought about in the lining membrane which frequently results in a permanent cure of these cases. I have in mind a lady who suffered intensely each month. A day or two before each expected period, I inserted a stem pessary curved to fit the small retroflexed uterus. The hyperœsthesia was marked. She would menstruate comfortably, and then I would remove the pessary to replace it the next month. Each time I would have the stem a little less curved.

After five or six months treatment she is well. The hyperæsthesia has disappeared and the retroflexed uterus is straight.

Dysmenorrhœa is more common among the highly educated and well-to-do classes than among the laboring classes. The cause is obvious. Among the poor, the sickly, delicate children die young. As the children of the rich reach puberty, the girls are deprived to a great extent of fresh air, sunlight and exercise and are compelled by custom to lead lives totally at variance with conditions best calculated to allow the proper development of their bodies. Just at this time they are in school and all their available force is used for intellectual work when the generative organs should be developing. Even when their hygienic surroundings are of the best and a good constition is inherited, if emotional and intellectual work is forced upon them when the generative organs should be developing, they will be likely to suffer from dysmenorrhœa due to imperfect development of these organs. Give these organs the best opportunity of developing by giving fresh air, sunlight, open air exercise, and at this period of life when a girl is passing into womanhood, do not allow her to exhaust her vital forces by emotional or intellectual work and we will have fewer of these cases to treat. Bicycle riding is preventive and curative of this trouble in many cases.

In treating these cases I hesitate to examine young girls. After getting the history of these cases I order the best hygienic surroundings, fresh air, exercise, bicycle riding, (in selected cases) if there is no intermenstrual pain, diversion from intellectual pursuits. The medicinal remedies which have given me the best results, when the general health is not impaired, is Hayden's viburnum compound and Liquor Sedans. When this treatment fails an examination should be made. In many of these cases, a small undeveloped uterus with a long, hard pointed neck is found. I usually begin the treatment by using pledgets of cotton, saturated with a mixture of glycerine 15 parts and boroglyceride 1 part; these are applied two or three times a week, remaining 24 hours, followed by a vaginal douche as warm as can be borne. These applications cause a free watery discharge, and in two or three weeks the cervix is softened and less sensitive to touch and introduction of the sound. In many cases this simple treatment will relieve the trouble. In more obstinate cases it is necessary to dilate the os interium under strict antiseptic precautions and make an application of pure carbolic acid or tincture of iodine, the cervical protector being used. Usually two or three dilatations between the menstrual epochs are sufficient. Any acute inflammation of uterine or periuterine tissues should be relieved before resorting to dilatations. Where dilataion fails, divulsion and incision or modification of Sim's operation becomes necessary or even removal of the appendages to bring about menopause in some of the most severe cases.

Amenorrhœa may be caused in two ways; by debilitating influences on the general system; and by local disease or imperfect development or atrophy of the generative organs. During an active debilitating disease or convalescence, amenorrhœa is expected and desirable. In chlorosis and anaemia it is especially desirable. When menstruation exists with well marked anaemia it points to an abnormal condition of the endometrium, and we should bring out amenorrhœa by treating the local trouble. As the anaemia or chlorosis is cured, as a rule the menstruation returns. When amenorrhœa exists after the general health is restored, local treatment should be resorted to, to prevent further atrophy and to stimulate the uterus and adnexa to complete development. We should examine into the history of the case with care to determine if the undeveloped hyperæsthetil uterus is due to congenital influences or to the influence of some debilitating disease or bad hygienic conditions during the period of development of the generative organs. Extreme mentac emotion, exposure to cold at the menstrual epoch, change of climate, a sea voyage, will cause a temporary suppression in many women. These cases are not so serious as the amenorrhœa of young women who use up their vital forces in intellectual pursuits to the detriment of their generative organs. These organs are the last to develop, and not being necessary to mental or physical work, they are the first to fail. One of the first indications of this trouble is delay in its appearance and suppression after it begins. This lack of development is the greatest cause of amenorrhœa, dysmenorrhœa and one great cause of the frequent lacerations of the cervix during parturition.

Almost all that is true of amenorrhœa is true of scanty menstruation and the treatment is similar.

Amenorrhœa may be due to absence of uterus or ovaries congenitally or by operation.

Treatment:—Little is gained by giving medicines except as they improve the general health and condition of the blood, as for instance the use of iron in anaemic and chlortoic patients. If the amenorrhœa continues after the general health is restored, special treatment is called for which is very much the same as used for dysmenorrhœa in the undeveloped uterus. Electricity applied regularly over the ovaries and to the cavity of the uterus stimulates development in some cases. Where pregnancy is suspected of course intra-uterine examinations are out of the questions.

Menorrhagia and metorrhagia as a rule indicate local disease or change in the lining membrane due to disease. As has been pointed out, amenorrhœa is the rule in certain diseases which change the condition of the blood. When menorrhagia occurs under such conditions a careful examination will show an abnormal condition of the endometrium, such as fungous granulations which will account for menstruation at all. Sometimes menorrhagia is due to some disturbance of the general circulation by mitral disease, pressure of large tumors etc.

Local conditions that cause menorrhagia are those in the uterus and those of the adnexa and periuterine tissues. In acute inflammation of periuterine tissues there may be menorrhagia or metrorrhagia; this flow often gives relief.

Myomatous fibroma and other tumors sometimes cause hemorrhage. It is not uncommon to find large fibroids of the uterus which do not bleed excessively at any time. In considering an operation for hemorrhage with existing fibroid, it is well to try curetting of the uterus first. Subinvolution, with granulations, especially after abortion, in many women causes hemorrhage. Sometimes we meet with cases where there is apparently no cause for the hemorrhage.

A young girl 17 years of age came to me for treatment. She was a finely developed country girl; had not exhausted her vital forces in emotional or intellectual work. The menstrual flow had continued for eight weeks. She had a previous attack five months ago lasting four weeks. She was put to bed, ergot was given and hot douches used without benefit. The hot water arrested the flow for two hours when it returned as freely as before. Examination showed a uterus normal in size and position, no hyperæsthesia, no granulations, no disease of adnexa. After dilating the cervix I swabbed out the uterine cavity with tincture of iodine, ordered a cold douche twice a day and gave liquor sedans. The flow became less immediately after using the iodine and in three days ceased entirely.

Cancer in women over 35 is the most frequent cause of metrorrhagia. On account of the importance of recognizing this disease early, it is the doctor's duty to insist upon a local examination as a means of diagnosis.

To cure menorrhagia or metrorrhagia, local treatment must be given in the most of these cases. Internal medication is rarely of benefit unless the general system is at fault. In a few instances I have found ergot combined with the fluid extract of hydrastis of value in controlling bleeding.

Avoid the use of tampons, they are generally more than useless. After having prepared the patient, dilate the cervix uteri with a steel dilator and with a sharp curette remove granulations or retained placental pieces. The attending hemorrhage can be quickly controlled by injections of hot or ice cold water. I never use the gauze packing as I get better drainage without it and it is a very painful process. By cleanliness and antiseptics the danger in the use of the curette is reduced to the minimum.

Menopause.—A perfectly healthy woman, not having any local disease should cease menstruating without any general or local disturbance at about 45 or 48 years of age. It is generally believed by the profession and the laity that it is natural for women to suffer from hemorrhage and reflex nervous symptoms during the "change of life," and nothing is thought of it unless the woman's life is endangered from loss of blood or insanity is iminnent.

Premature menopause, that is coming before 40, may result from prolonged amenorrhœa after some debilitating disease resulting in atrophy of the generative organs. Removal of the tubes and ovaries does not always bring about the menopause.

If menstruation is too profuse or two frequent, a careful examination should be made. Fungous granulations and polypi are especially apt to occur at this time. Some women menstruate after they are 50; but if the flow is too profuse with nervous symptoms hot flushes etc., if the cervix is dilated granulations or polypi will frequently be found, the removal of which will cause the menopause to come about normally. Dilatation of the cervix occasionally, will relieve the nervous symptoms.

DIURETIC ACTION OF SALICYLIC ACID AND CAFFEINE.

SIEGERT (*Münch. Med. Woch.*) concludes a study of this subject. In a case of chronic peritonitis salicylate of sodium in both small and large doses lessened diuresis, the specific gravity of the urine being increased. With pure caffeine there was constantly observed a markedly increased diuresis, but with caffeine natro-salicylate the opposite effect was seen, the caffeine diuresis being suppressed by the salicylate. Caffeine produced its most marked effect after a course of small doses of salicylates. The use of caffeine alone made tapping of the ascites unnecessary owing to the absorption of all the œdema, which, on the other hand, was increased by the use of salicylates. The author shows by experiments on animals how the salicylates can abolish the diuresis produced by caffeine. Thus it is undesirable to use the combination of caffeine and salicylates where a diuretic effect is aimed at. In one case where tapping had been done some ninety times the use of caffeine made any further tapping unnecessary. The author has used caffeine with digitalis, and has found the diuretic effect very marked. It is desirable to use the insoluble caffeine in preference to the soluble combinations. The author would recommend the use of caffeine with or without digitalis in all cases of venous engorgement with intact kidneys in order to remove the œdema by diuresis.—*Br. Med. Jour.*

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Editorial.

THE BUBONIC PLAGUE.

Very interesting studies of the bacillus of the bubonic plague are being made by Passed Assistant Surgeon H. D. GEDDINGS, and reported through the pages of *Public Health Reports*. DR. GEDDINGS is pursuing his studies in the Pasteur Institute, under the direction of DR. ROUX. In his earlier reports he described the bacillus, drawing attention to its peculiar characteristics as to shape, size, manner of growth, staining properties, etc. Attention was called to the misleading statements in KITASATO's first published description. KITASATO likened the bacillus to that of chicken cholera, a small fine bacillus with rounded ends, staining well with the ordinary basic aniline dyes. In reality the organism is a cocco-bacillus, almost as broad as long, about two micromillimetres in greatest diameter, staining readily, it is true, with the ordinary aniline dyes, but also very readily overstaining. It is completely decolorized by the method of GRAM. It grows readily upon ordinary culture media; in bouillon it forms flakes which rapidly sink to the bottom of the test-tube, leaving the liquid above clear, which appearance is very characteristic. The virulence of the bacillus is extreme and is increased by being passed successively through different animals. It is reduced by successive cultures on ordinary media, but can be restored by passing again through animals. While its usual mode of entrance is through some abrasion, a break of continuity does not appear to be necessary, for healthy rats were infected by eating the spleen or other organs of an animal dead of the plague. This point, however, is still under active discussion. As a rule a small red spot marks the point of infection, which in Hongkong, where the natives go barefooted, is usually on the foot, while with the Hindoos, who wear a covering upon the feet, it is usually on the hands or face, the infection being carried by insects and vermin. This red spot becomes successively a vesicle and a pustule and in the ganglionic form of the disease, a general redness or a series of vesicles marks the passage of the infection along a lymphatic tract.

The disease is divided into three types (a) the bubonic, or ganglionic, (b) the septicæmic, and (c) the pneumonic. The bubonic is the most common type, the septicæmic furnishes the largest proportion of the small number of recoveries, while the pneumonic is the most fatal. The most reliable reports place the mortality of the present epidemic in India at 90 to 95 per cent. of those attacked. This does not include those subjected to the serum treatment and is probably too low rather than too high as the aversion of the Hindoo to hospital treatment causes the concealment of many cases. The results of serum treatment have not been as brilliant as was hoped for from the success attending the experiments made on a small scale by Gersin in the epidemic at Hongkong. In the present epidemic serum was used from two sources, one prepared by Gersin at the Pasteur Institute at Saigon, the other prepared at the Pasteur Institute at Paris. With the former the mortality was 33 per cent., while with the latter it reached 50 per cent. The mortality in all cases treated by serum before systemic intoxication —that is to say on the first or second day of the disease— was 12 per cent. The lack of success is attributed to the inability to get serum of sufficient antitoxic strength. An accident in Dr. Gersin's laboratory cut off the supply from that source and he was furnished with serum prepared at the Pasteur Institute in Paris. The supply from this source was quickly exhausted, and in the belief that a weak serum would be better than none, a serum was issued which, though having a high immunizing power, had a comparatively low antitoxic or curative power. The difference is one of degree not of kind. If a horse is injected intra-peritoneally with a culture of the plague bacillus, killed by exposure to heat, the animal in time acquires a certain immunity to these injections, and his serum is found to have certain preventive properties, viz, it will protect an animal into which it is injected against a culture of the plague bacillus; in other words it is preventive or prophylactic. This result has been arrived at by the action of the toxines contained in the killed culture, but it is to be borne in mind that the toxine is not in a soluble condition, but it is largely held enveloped in the bodies of the dead microbes. On the contrary, if the horse is injected with a live culture of plague, or a soluble toxine, and intravenously instead of intra-peritoneally, an immunity will be established, and the serum of the animal will be found to have not only an immunizing power as before, but in addition an antitoxic or curative power, that is to say, it will protect an animal against the toxines of plague, or the animal having been inoculated with plague, it will exert its curative or antitoxic influence. But the process of treating horses with the live culture is one requiring great caution and care and necessarily requires much time.

This statement accounts for the reports antagonistic to the serum treatment, and leaves room for hope that the persistent efforts of Dr. Gersin and Rr. Roux and their assistants will be crowned with success, and that the world will be given, against its will, probably, a remedy for this horrible and fatal malady. One instance was cited by Dr. Geddings clearly showing the immunizing power of the serum:

The Bombay manager of the local branch of the Credit Lyonnaise resided with his wife, children, and a numerous retinue of native servants in a dwelling in an infected portion of the city. His little daughter was stricken with the pest in a virulent form; was treated with the serum, and made a rapid and uneventful recovery. As a precautionary measure the whole family were subjected to inoculation, and the same measure of treatment was offered to the native domestics. Some accepted and escaped infection, while 6 who declined on the ground of religious scruples were all stricken, and 5 died. It seems that a more crucial test could not have been devised, or a more triumphant vindication obtained. Neither is the great reduction in the mortality due to the use of even an inferior serum a thing to be ashamed of. A reduction from 90 or 95 per cent. to 33 or 50 per cent. is a great achievement.

QUESTIONS SUBMITTED BY THE STATE BOARD OF MEDICAL EXAMINERS AT MOREHEAD JUNE 1897.

MATERIA MEDICA AND THERAPEUTICS.—Dr. Tayloe.

1. Give the symptoms and treatment of poisoning by gelsemium.
2. Give the symptoms and treatment of acute ergotism.
3. Give the physiological action of camphor.
4. What are the constituents of a seidlitz powder?
5. Give physiological action of alcohol.
6. What is glonoin, and give its therapy?
7. Give physiological action of phosphorus and best antidote for poison by it.
8. Of what is salol composed, and give its uses?
9. Give the physiological action of creosote and dose.
10. How would you treat a patient who had taken an over dose of water of ammonia?
11. Give the physiological action and therapy of ox-gall.
12. What are the constituents of Dover's powder?

SURGERY.—Dr. Baker.

1. Define, (1) Phlegmon, (2) Tetanus, (4) Sapræmia, (5) Spondylitis, (6) Bacillus.
2. Give the symptoms of (1) Pyœmia, (2) Erysipelas, (3) Cerebral abscess of third left frontal convolution, (4) Appendicitis, (5) Carcinoma of breast.

3. Give the diagnosis of (1) Syphilis, (2) Cerebral concussion (3) Concealed hemorrhage, (4) Synovitis of knee joint, (5) Coxalgia.

4. What is etiology of (1) Inflammation, (2) Sapræmia, (5) Gangrene, (4) Myxœdema, (5) Actinomycosis. (6) Erysipelas.

5. What is the treatment (1) Chronic abscess, (2) Fracture of femur (upper third), (3) Internal hemorrhoids, (4) Glaucoma, (5) Talipses equino-varus, (6) Shock, (7) Stricture of rectum.

6. (1)Describe the operation for fistula in ano, (2) The method of reduction of subglenoid dislocation of humerus.

7. Give temperature chart, first week, of (1) Hectic fever, (2) Septicæmia, (3) Malaria.

8. Describe the operation for strangulated inguinal hernia.

PHYSIOLOGY.—Dr. Anderson.

1. Under what two great heads are food stuffs classed? Name article of food belonging to each class.

2. Name ferments respectively of Saliva, Gastric Juice and Pancreatic Fluid.

3. What part does each perform in digestion?

4. What forces keep up circulation?

5. Explain how and why it is that incompetency of the Aortic Valves affects the nourishment of the heart.

6. What is the office of Red Blood Corpuscles, their size and relative proportion to White?

7. What is the nervous mechanism of respiration?

8. What is the object of respiration, and how is breathing maintained?

9. Through what nerve or nerves is the sense of taste carried to the brain?

10. What are the component parts of a complete nerve?

11. Name centres lodged in the Medulla?

12. What pathological condition is induced by a Lesion in the floor of the 4th Ventricle.

ANATOMY.—Dr. Whitehead.

1. Describe 1st, the External Surface of the Squamous Portion of the Temporal Bone. 2d, the Ramus of the Lower Jaw. 3d, the Shaft of the Femur. 4th, the Inferior Extremity of the Radius.

2. Describe the Elbow Joint.

3. Describe 1st, the Anterior Humeral Group of Muscles. 2d, the Posterior Femoral Group of Muscles.

4. Give the relations of 1st, the Anterior Tibial Artery. 2d, the Brachial Artery *at the Elbow Joint.* 3d, the Right Common Carotid Artery *to muscles.*

5. Describe 1st, the Hypoglossal Nerve. 2d, the Anterior Crural Nerve.

6. Give the relations of the stomach.

7. Describe the Internal Saphenous Vein, and its opening in the Fascia Lata.

CHEMISTRY.—Dr. Battle.

1. Define (a) Qualitative Analysis; (b) Synthesis; (c) a Base; (d) a Salt.

2. Give the physical properties of Iodine, Sodium and Mercury.

3. Give the physical and chemical properties of Carbon Monoxide and explain its actions when inspired.

4. Write the names of the substances for which the following are the symbols K O H, H C N, $Ag\,N\,O_3$, $H_2\,S\,O_4$, $C_6\,H_{10}\,O_5$.

5. Explain the chemical difference between Calomel and Corrosive Sublimate.

6. What is the chemical change which occurs in the fermentation of Glucose?

7. What is the chemistry of the Coagulation of Milk.

8. What is the chemistry of the Saponification of Fats.

OBSTETRICS.—Dr. Weaver.

1. Describe the mechanism of labor in posterior rotation of the occiput, the vertex presenting.

2. What is placenta previa?
   (a) How soon does it cause trouble?
   (b) What are the dangers?
   (c) What treatment is demanded *before* and at full term?

3. Give symptoms, cause, and treatment, of Eclampsia.

4. How is the placenta formed?
   (1) What are its functions?
   (2) Does the maternal blood enter the circulation of the child?

GYNECOLOGY.

5. Name the displacements of the uterus, and give the points of diagnosis between retroflection and retro-uterine fibroid.

6. Describe an efficient secondary operation for the complete rupture of the perineum.

7. Give symptoms, differential diagnosis and treatment of pelvic hematocele.

8. How would you diagnose between cancer of the uterus and sloughing fibroid polypus.

PEDIADRICS.

9. Give symptoms, with points of diagnosis between *acute dyspeptic diarrahœa* and *cholera infantum*, and treatment for each.

10. What is the difference in etiology and pathology, between diphtheria and membranous croup? Give a detail of the latest and best treatment.

11. Differentiate between scarlet fever and the other exanthematous diseases.

12. Describe symptoms and treatment of chorea.

PRACTICE OF MEDICINE.—Dr. Burbank.

1. Give the methods of physical examination of the chest.

2. Give differential diagnosis between capillary bronchitis, emphysema, and pulmonary tuberculosis.

3. The heart.

Define: (a) Diagnosis of mitral regurgitation.
(b) Aortic obstruction.
(c) Hypertrophy.
(d) Dilatation.

4. Give pathology of pachymeningitis, spinal sclerosis posterior, and acute myelitis.

5. Define: (a) Neuritis.
(b) Neuralgia.
(c) Chorea.
(d) Epilepsy.

6. Give synonyms, definition, etiology, symptoms, diagnosis, prognosis and treatment of simple anæmia.

7. Describe the hygienic management of a case of typhoid fever.

8. What is the relation of drinking water to the production of malarial fever?

9. Define: (a) Acute gastritis.
(b) Enteritis.
(c) Diarrhœa.
(d) Dysentery.

10. What is etiology of gout? Differential diagnosis of rheumatism and gout and treatment of each.

Abstracts.

THE HAND AS A TAMPON AND DILATOR IN PLACENTA PREVIA—In the course of a discussion on this subject Dr. C. P. Noble (*Med. and Surg. Reporter*) said: It is well to consider in detail a number of methods which aid the practitioner in controlling hemorrhage.

1. *The tampon.* In my opinion, the tampon has killed more patients than any other method of treating placenta previa. It delays labor and favors the production of sepsis. It should be used only as a temporary measure to arrest hemorrhage, to enable the practitioner to procure professional counsel and assistance.

2. *The Barnes' bag* has a small field of usefulness. It may be employed to dilate the cervix and to produce a partial separation of the placenta.

3. *Partial seperation of the placenta.* There is concord of opinion that partial separation of the placenta is of great service in controlling bleeding from placenta previa. In years gone by, when the principles of labor complicated by placenta previa were not so well understood, various theories were held by different authorities. It is interesting, however, to observe that they all agree upon this point. As the lower segment of the uterus dilates, the placenta inevitably is more or less separated from the uterus, thus opening the uterine sinues and promoting hemorrhage. By artificially separating the placenta, while considerable hemorrhage may take place for the moment, an opportunity

is given to the uterine tissue to retract, and in this way to close up the blood vessels and prevent hemorrhage.

4. *Manual diliation* is one of the most valuable means at our command in dealing with placenta previa. Dr. P. A. Harris, of Patterson, N. J., has systematized a method of manual dilation which makes use of the flexor instead of the extensor muscles, in addition to having the advantage of the fingers and hand used as a wedge. It is easy to test the difference in the strength of flexion and extension of the fingers. Dr. Harris'method consists in introducing a hand or half hand, into the vagina (the patient being anesthetized), then introducing the innex finger into the cervix and dilating it somewhat. Then the thumb is introduced followed by the index finger; and the thumb being held rigid, the index finger is flexed arcoss its palmer surface, stretching the cervix sufficiently to enable the thumb, middle and index fingers to be introduced. The thumb is again held rigid, and the other fingers flexed across its palmer surface The process is repeated until all the fingers are introduced,and flexion practiced as before. The thumb and fingers, held "cone-shaped," may also be used as a wedge in dilation.

It is essential to use anesthesia to get good results from manual dilation. I have had no experience in the use of cheoral to favor dilation in placenta previa, and should, upon theoretical grounds not care to use it in this condition, because of its well-known depressing effect upon the heart. The danger of shock of asthenia from hemorrhage is too great to take any chances.

To go back to the management of placenta previa, the most important point is to urge the prompt induction of premature labor, under the limitations already laid down. In cases of lateral or marginal placenta previa with little or no hemorrhage, after manual dilatation of the cervix and partial separation of the placenta, if there is little or no bleeding, a vertex presentation, and good pains, as a rule the membranes should be ruptured and the case left to nature, or to nature assisted by the forceps. This is the method which has been followed by Murphy, with the admirable results referred to. On the other hand, should there be much hemorrhage, or should the case be one of partial or complete placenta previa, it is best, without dilating the cervix in full, to induce two fingers, partially separate the placenta, then rupture the membranes, and perform podalic version after the method of Braxton-Hicks. When the leg is drawn down, it acts as a plug, and, as a rule, hemorrhage ceases. Should it recur, traction upon the leg arrests the hemorrhage and, at the same time, facilitates labor. The case should be left to the natural efforts unless the condition either of the mother or child demands rapid extraction. The results have been better when delivery has not been too much hurried.

I should like to urge the use of salt solution, by transfusion into a vein, by introducing it under the skin or under the breast, or by introducing it into the stomach and bowels, as an important point in the treatment of collapse due to hemorrhage, whether from placenta previa or from any other cause. Every practical surgeon will testify that it is the most powerful and effectual means of saving life in jeopardy from hemorrhage, which we have at our disposal.

Reading Notices.

An Hypnotic for Alcoholic Subjects.—One of the most prominent manifestations of the disorder of the nervous system resulting from the excessive use of alcohol is a condition of habitual sleeplessness which often is controlled with difficulty. To obtain the wished for sleep the patient is apt to indulge in still further dissipation or to become addicted to the use of morphine, chloral, or some other equally harmful hypnotic. It, therefore, becomes an important question how best to relieve the insomnia without inflicting further damage upon the deranged nervous system. Obviously a remedy must be selected which will not induce a habit or exert toxic effects. According to a writer in the Western Medical and Surgical Reporter, sulfonal is perhaps the best hypnotic for patients who have been drinking excessively. He states that "in cases where the patient is extremely nervous and where sleep is a necessity, as high as sixty grains can be administered without producing any bad effect. It is better to begin with ten grains and increase the dose every two hours until sixty grains are reached or sleep is produced."

BUFFALO LITHIA WATER

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ANALYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

New York, December 3, 1896.

Dr. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

Dear Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection containing a number of fragments, and also the three boxes, each containing a single Calculus, mentioned in your letter as discharged by different patients while under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of each specimen, and designated them alphabetically.

One of Calculi from collection marked "A" was $\frac{5}{16}$ of an inch in diameter, of an orange color, and on section exhibited a nucleus surrounded by nine concentric layers of a crystalline structure. On chemical analysis it was found to consist of **Uric Acid** (colored by organic substances from the urine), with traces of Ammonium Urate and Calcium Oxolate. A fragment of a broken down Calculus from the same collection was found to consist of **Uric Acid.**

One of the fragments taken at random from the collection marked "B" which was still more disintegrated than the preceding one, proved on analysis to be composed chiefly of **Uric Acid** and Ammonium Urate, with a trace of Calcium Oxolate.

The contents of the boxes marked "C" consisted chiefly of whitish Crystalline materials. On microscopic examination they exhibited well defined and prismatic crystals, characteristic of "Triple Phosphate." On chemical analysis they were found to consist of Magnesium and Ammonium Phosphate (triple phosphate), Calcium Phosphate, Calcium Carbonate a trace, Sodium and Potossium Salts in traces, Uric Acid and Urates none, Calcium Oxolate none, Organic debris in considerable quantity, and matters foreign to Calculi.

The fragments of Calculi in the collection marked "D" were numerous, and of sizes varying from small fragments to $\frac{7}{8}$ inches in length, $\frac{5}{16}$ inches in width and $\frac{5}{16}$ inches in thickness. Some of the fragments were white and others were gray in color. On chemical analysis they were found to consist partly of the variety known as "Fusible Calculus," Ammonium and Magnesium Phosphate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in traces, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly spherical in shape, consisting of Crystalline layers from $\frac{3}{8}$ to $\frac{1}{4}$ of an inch in diameter. They were of a brown color, and on analysis were found to be chiefly Uric Acid, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,

Analyses F, G and H, omitted for lack of space.

R. OGDEN DOREMUS.

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Twentieth Year. AUGUST 5, 1897. Vol. 41. NO. 3.

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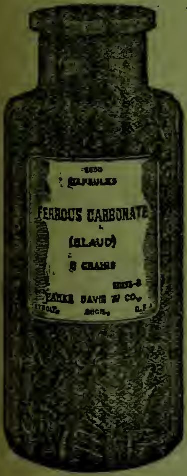

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A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XLI WILMINGTON, AUGUST 5, 1897. NO. 3.

Original Communications.

MODERN OBSTETRICS.*

BY S. L. MONTGOMERY, M. D. Concord, N. C.

THE time allotted me in which to read this paper will permit me only to touch upon some of the most important subjects engaging the minds and thoughts of the profession to-day, and while I view with pleasure and pride the rapid strides that have been made in the other branches of medicine, I feel that, with all the instruments and devices, the works of strong minds, the death rate in child bearing has not been materially lessened.

From the information I can gather on this subject, I find that we are only a few steps in advance of our fathers of fifty years ago. I do not deny that many lives have been saved by the modern Obstetrician, but who can count the number of mothers sleeping the everlasting sleep of death as the result of the indiscriminate and unskillful use of the forceps.

He who applies the forceps simply for the sake of saving time places time above the life of a mother and her unborn child. I know that it requires patience to sit and count the stars through the cracks of a log cabin when we have calls urging us to the palace, but the physician who would neglect the cabin for the palace deserves an everlasting abiding place among the demagogues, who imposed a tax of ten dollars upon us for caring for and serving the poor and distressed of the hovels.

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*Read before the North Carolina Medical Society June 8, 1897.

A source of much harm, in my opinion, being practiced to-day, is the vaginal douche. Prof. Lusk, according to modern medicine, expresses himself as strongly opposed to the vaginal douche, before and after parturition.

While the vaginal canal abounds in micro-organisms, he considers that they only intensify the acid reaction of the vaginal secretions, and render the latter especially unfavorable to the multiplication of the streptococcus, said by many to be the germ that produces septicemia.

The nórmal vaginal secretions furnish a soil hostile to all forms of cell growth. The cervical canal of the pregnant woman is protected from the invasion of micro-organism by a mucous plug, and thus in natural labor the protection of the uterine cavity is complete. The entire parturient act furthermore serves to guard the woman against infection.

With the rupture of the membranes, the downward current is produced by the escape of the amniotic fluid.

The descent of the child cleanses the vaginal canal, and the increase of the vaginal secretions is inimical to the action of the septic germ. Finally, the passage of the placenta completes the toilet of the vagina.

The fact that nature provides this excellent means of self-defence clearly shows that the disturbing method of disinfection employed before and after labor, under the plea of prophylaxis, is not commendable. The anti-septic douches dissolve the mucus, set free imprisoned germs, weaken the resistance of tissue, and contribute to the extension of the source of infection. Meddlesome mid-wifery is wrong in every case in which it is practiced.

Are the forceps used many times now where they were used very rarely years ago? I think so, and would ask you if the comparative results justify this use.

Are there not other means to alleviatethe pains of the parturient woman, and assist nature in her efforts to complete the labor,—other than forcibly dragging the child into the world, often before the parts are ready for its passage, the only excuse being that labor lasted twenty four or thirty six hours? Are we not making too frequent examinations? The conditions having been ascertained to be normal, diagnosis of position made, and degree of dilation of os known, is it necessary to annoy and often endanger the health or life of the woman by frequent examinations, often prompted by our own impatience?

Are we not rupturing the membranes too soon, and are we not leaving our cases in the care of nurses, telling them only to send for us when they are sure of a speedy completion of the labor. Is this not leaving them to act for us, and by our commands, one of the worst forms of meddlesome mid-wifery, as they can only ascertain what we require them to know by unskilled frequent examinations?

The second stage completed, are we not in too great a hurry to cut a pulsating cord, and forcibly express the placenta, or introducing the hand to remove it?

Would it not be more scientific to wait a reasonable time for its separation and expulsion, and allow nature to complete the third stage as well as the first and second?

Is not any interference with normal labor, or any other, aside om assisting nature should she flag in her efforts towards its completion, unless demanded by threatening danger to the mother or child, meddlesome mid-wifery?

Are we not, in our great haste, losing sight of our obligation to consider the interests of the mother and child as paramount to all others, no matter what outside interests suffer by our detention by the bedside? From the time we enter her room, and take charge of the case, our duty is to her and her unborn child only, and needless hurrying the labor or leaving too soon after the birth of the child, violates that obligation. I remember, about two years ago, I was called to attend a young woman in her first confinement. I reached the home about one or two o'clock in the morning. The labor, which was a normal one, lasted about seven hours. I left in a few moments, being in a hurry to see some other patients, but just as I was leaving, the woman remarked that she was having a chill, having had two or three chills before her confinement. I paid little attention to her remarks, thinking probably she had a nervous rigor, or a malarial chill. I saw her husband on the streets about four or five hours after leaving his home in the morning, and he told me that his wife had a very high fever from the chill. I went immediately to see her, and found her with a temperature 104½, pulse 130. I gave her an antipyretic, called at 8.30 o'clock next morning and found her temperature 104, pulse 120, small and weak. I began to think seriously of my diagnosis. Was it malaria or septic, or both?

If septic, from what source did it come?

I washed my hands with soap and water, which I generally find sufficient. If septic, why in such a hurry, for she had the chill before I left the house, which was not exceeding fifteen minutes after the birth of the child?

Until this day I have never been satisfied thoroughly as to the diagnosis of this case. The woman recovered after a hard struggle of three weeks. At my morning visit on the fourth day, I found slight tympanitis with acute tenderness over the entire abdomen. I also found a scant and very offensive vaginal discharge. Had I remained with this woman one hour, the result of course would have been the same.

But suppose the case had been one of post partum hemorrhage, the woman would have been dead, in all probability before a physician could have been secured.

My duty was at the bedside of that woman, and I should have remained there the proper length of time.

Only a short while ago, I was called to see a woman in her tenth confinement, and her sister in giving a history of the case, said the patient had been passing large clots of blood for several hours. In making my examination, I found the os patulous, but not dilated. Pains had ceased.

I remained for a while, the pains not returning, and no clots passing, I went to my office leaving instructions with the family to call me when the pains returned or more clots passed. I was recalled in about five hours, found the woman with strong frequent pains, and most alarming hemorrhage. Examination revealed the os dilated to the size of a free silver dollar. Assisting nature with my thumb, index and second fingers, dilatation was soon complete.

I ruptured the membranes, the head came down, and the hemorrhage ceased at once. Labor was completed in a short time, the child dead. The woman rested quietly for twenty minutes, when she was seized with violent pains again.

Having previously satisfied myself that another fœtus had not been left in the womb, and the pains being too severe for after pains, I was at a loss to know the cause of these pains, and in making my examination for this purpose, my hand came in contact with a great mass of something I knew not what. I carried it to the rear yard, and found it to be a blood clot four inches in circumference and six inches in length. Why that clot was not expelled with the placenta, I am not able to say. Had I left this case as soon as I did the one just reported, I should have felt that my entrance to that home again would have been a just cause for the wrath and condemnation of that family forever,

I hope no member of the Society will think me opposed to any means known to obstetricians when we have to resort to such measures to save life. On the other hand I think it the duty of every physician who practices obstetrics to face and meet any danger that may confront him, and he who is able to do this has accomplished for himself a name that will be sung by fathers and mothers throughout his country.

We all know that there hangs upon us a heavier responsibility in obstetrics, than in any other branch of medicine.

The eye not only of the family, but the neighborhood is upon us, and if the patient passes away, notwithstanding we feel ourselves competent, and know that we have done our full duty the death of the woman is laid at our door.

We should, however, console ourselves with the fact that there is a higher and better reward than reputation, that is, the consciousness of duty performed.

Let us go forward then, doing our duty, "holding fast to that which is good," despising empiricisms, relieving the suffering, driving back the death angel, and when we shall pass away, though no temple may be erected to us at Egidaurus, your name and mine, "will escape the consuming conflagration of reproach."

PRACTICAL RESULTS IN THE DIAGNOSIS OF CONTINUED FEVERS FROM EXAMINATIOM OF THE BLOOD.*

By H. A. Royster, A. B., M. D., Raleigh, N. C.

AT the last meeting of this Society, I had the honor to lead in a discussion concerning the existence in North Carolina of a third form of continued fever other than typhoid or malaria.1 My tentative opinion there expressed was that the largest number of the obscure cases were probably mild types of typhoid, while I insisted strongly on the necessity for blood examinations in the settlement of the question. I have not seen fit to change my views on the subject, but rather to have them strengthened by continued observation. In the light of further experience I may assert that I do not believe that there exists in North Carolina a third form of continued fever, but that all our febrile conditions, which are of sufficient length to be called "continued", are either typhoidal or malarial in origin.

Of the doubtful border-line cases, many are atypical typhoid fever; some are cases of malaria in which no blood-examination has been made.

Turning aside from this question for the moment and leaving it open for further investigation, I wish to record, as bearing somewhat upon the matter, the results of examination of the blood in over thirty cases of continued fever observed since my preliminary paper was read over a year ago. In the examination which forms the basis of the statements contained in this report, every one of the cases which gave a negative result as to the plasmodium proved in the end to be typhoid fever. Those which showed the parasite were found to correspond clinically to malaria and were cured by quinine.

The method used in examining the blood is very simple. The necessary apparatus is carried with me in a small hand case, containing several glass slides and cover-slips, a wad of absorbent cotton and a stoppered tube of alcohol. A small pair of dressing forceps and a bistoury are always in my pocket case. The blood is drawn preferably from the lobe of the patient's ear. After washing well with alcohol the point to be punctured and allowing it to dry in the air, a slide and cover-slip are prepared in the same manner and then rubbed very vigorously for a few minutes with a clean linen handkerchief, being careful not to touch their flat surfaces with the fingers afterward. The skin is then pricked with the point of the bistoury and the blood allowed to ooze out, squeezing the part being avoided. The first drop is wiped off with the linen and, as another drop accumulates, it is caught on the glass cover which is held by the forceps immediately in contact with the blood, not the patient's skin. The slip is then inverted and allowed to fall upon the glass slide without pressue, so that the film of blood spreads out smoothly and evenly. It is then ready for examination and will remain fresh for an hour. For the most satisfactory work a $\frac{1}{12}$inch oil immersion lens is needed, though lower powers can be used.

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*Read before the North Carolina Medical Society June 8. 1897.

I have had no experience with staining methods in the study of the plasmodium. All my work has been done with fresh specimens taken from patients in both hospital and private practice, some of whom were scattered widely apart. There has been no attempt on my part to go into an exhaustive study of the malarial parasite. This is being done and will continue to be done by men who are more able, better equipped and have more time for the work than I could devote to it. It is an interesting field for research, especially the question of the association of certain forms of the protozoa with certain types of fever. I have left all that out in my work save in a casual way. My energies have been bent chiefly toward putting into practice a method by which we may in the very beginning of continued fevers either determine the existence of malaria beyond a doubt or exclude it from the diagnosis altogether. As soon as I am called to a patient with fever, after taking the history, I invariably examine the blood before giving my opinion. If I do not find the plasmodium, I re-examine the second and, possibly, the third time and, failing then to discover it, I conclude that the patient has not malaria, taking into account every symptom in minutest detail. This is a sufficient contra-indication to the administration of quinine and, according to my views already expressed, is evidence that the patient has typhoid fever. The presence of the plasmodium, of course, means malaria, relying again on the clinical history as far as it goes. Widal's serum test for typhoid, when it comes into more general use, is likely to simplify this whole question. In this report, the diagnosis made by blood examinations gave positive indications for treatment which were successfully carried out in each instance.

It is not deemed necessary to read before you full records of all cases. Only three have been selected, as illustrating distinct types in which examination of the blood is essential to accurate diagnosis.

I. William H., age 10(?) years visiting in Raleigh last summer from a town in eastern North Carolina. His fever came suddenly, with a chill, the temperature rising rapidly to 105°F. and over. There were no prodromal symptoms of typhoid. Three examinations of the blood failed to show the plasmodium. Sponge baths were given and eliminative treatment for enteric fever begun. In a few days the temperature was pursuing a steady course and delirium, diarrhœa and rose spots developed. The little patient, under the care of another physician, went through a typical attack of typhoid fever and recovered.

II. M. C., girl 8 years of age, native of Wake County, had symptoms suggestive of neither typhoid nor malaria, but was brought to me by her mother who said that her daughter was "run down" and had been for two months. They had just returned from a visit to the country. The child's temperature was found to be 101°; skin pale; no special symptoms. Blood showed malarial parasites. Patient was cured by two grains of quinine every 4. hours, followed by arsenic. This case is one of many in which sub-acute or chronic malarial infection is, no doubt, responsible for conditions of so-called nervous prostration, etc.

III. This case was one which began rather like typhoid, though the patient, Miss M. B., a young lady of 18 years, was a resident of one of our eastern counties, and was in Raleigh only for a short time. The attack came on gradually, with aching in the limbs, headache and nose-bleed; followed in four or five days by slight chilliness and fever which ran up to 103° and 104°F. Five grains of quinine sulphate every 4 hours plenty of water to drink and sponge baths to insure patient's comfort.

Recovery. Duration of fever five days after treatment was begun.

In conclusion, I desire to emphasize my belief in the following statements:

1. Our continued fevers are either typhoid or malarial.

2. The first step in their diagnosis is the finding or excluding of the malarial parasite.

3. This can be done readily and satisfactorily in the manner indicated.

DISCUSSION.

Dr. O'Hagan: Dr. Royster's paper I regard as very valuable, inasmuch as it has shown almost invariable tests for arriving at a correct diagnosis of fevers which are very often obscure. Old medical fossils like myself will hardly take up these instruments of precision at this late day, but clinical experience directed me to that test, the use of quinine to make up a differential diagnosis. I have long since come to the conclusion that there are but two fevers, and they are malarial fever and typhoid fever. This mongrel type which was named by Dr. Woodward typhoid-malarial fever, I have long since failed to notice in any way whatever. Dr. Royster's paper has given you the technique of making differential diagnosis absolutely certain, which will save time and enable you to initiate the proper treatment for the special fever, whatever it may turn out to be. As long ago as I can remember having a case of this fever when I gave quinine for four days and the fever did not subside, I at once determined the case to be typhoid fever. Some of the symptoms are frequently absent; epistaxis is absent, tympanitis is absent; there are no means to verify it except a post mortem examination, which is unpleasant and unsatisfactory. But I must confess that I am indebted to these gentlemen here for simplifying the method of diagnosis. I regard this as of exceeding value to men in making an accurate diagnosis. It will save the patient from swallowing a vast deal of physic. We are indebted to Dr. Royster for a very valuable paper, and not the less valuable because it is short and to the point. He gives you the very kernel of the nut, and makes the matter so plain that the wayfaring man, though a doctor, my understand and not err.

Dr. Duffy: I would like to say that I think Dr. Royster's paper a most important one, and that we are very much indebted to him or any one who will so simplify the matter of making a diagnosis between these two fevers. Last year I was very interested in the discussion as to whether there were more fevers in North Carolina. I must say that I was about as much pleased with what was said on one side as on the other. Like other persons who have had much experience with fevers, I was on the anxious bench to know whether it was the one or the other. I could hardly subscribe to the doctrine, although I felt perhaps more inclined to it than I have heretofore, that we could rely on quinine as a test even after thoroughly cinchonizing my patients, not only as a matter of therapeutics, but as a diagnostic test. I had a case not long since, a little patient who died. Began with a high fever, no prodromes, except some few weeks before had some symptoms of acute articular rheumatism, which only helped to obscure the diagnosis, and make me more in doubt. The fever was constant and high. Her mother said she had been better and eating more just before the attack of fever than she had in a long time. Yet she was taken suddenly with a high temperature, which nothing would keep down long. There was no step ladder coming up of the fever such as books tell us of at all. I watched every day for the eruption, and there was never any that we could see at all characteristic. After that had gone on about a week, because quinine had no effect on it, a careful examination of the lungs showed no lesion, and no special symptoms of any thing else, I said to the friends that I regarded it as typhoid fever. I had a consultant and he agreed with me. It was only a few days before the patient had violent and copious hemorrhage from the bowels and died. I suppose there was no doubt at all but that we had true typhoid lesions and perforation of the intestine. But if all such cases could be subjected to the microscope for examination, and a diagnosis of typhoid fever postively made, and the patient not subjected for several days to profound cinchonism, which seemes to be harmful, we have certainly made a great stride. I wish to say in reference to the exclusion of malarial fever by the quinine method, cinchonizing the patient, and if the fever continues regarding it as non-malarial, I have charge of the Marine Hospital Service, at NewBern and I have patients who come to see me from off the rivers, and occasionally I get hold of a man who comes to me looking pale and you might say the picture of malarial infection. He has a big spleen, he has had numerous chills, not only last fall, but he has had chills year in and year out. The kidney secretions turn dark brown, almost black with heatand nitric acid. I have had these men in the hospital where I could watch them every day, and we would send them out and they would come back with a little fever. I have watched them until the hospital sixty days were out, and in one instance I had a man transferred to the Wilmington hospital and had him to come back from there with still a little fever. He had taken quinine and Warburg's tincture, which is a strong solution of quinine with other things, iron, and almost everything else that I could think of that would be likely to be of service to him, still he had fever. You cannot wonder that I should be skeptical of the diagnosis of malarial fever with quinine.

Dr. Parrott: Dr. Duffy's remarks recall to my mind experience along this line which I had while in Louisana. We had a great many patients in the hospital from the Central American States suffering with remittent malaria. A great number of these cases, after they recovered from the acuteness of the attack, remained in the hospital because of the low form of the fever, ranging from 99 in the morning to 101 in the afternoon. I have seen them go on in this way day in and day out for six months. I have had a great deal of experience along this line. An examination of the lungs and sputum showed in a number of these cases a form of incipient tuberculosis, the pulmonary organs in a majority however being entirely clear and in a healthy condition. In a few of these cases I found either a form of dysentery, hepatic abscess or a pre-existing malarial cachexia. In the vast majority of cases however I had to contend with simply a low form of fever, called down there "continued fever.' It is very fatal, wearing the patient out because of its long continuance. In 1895 I instituted a series of experiments based upon Prof. Elliot's theory concerning the diathesis. I based my investigation on the fact that the whole human race could be divided into diatheses and tnat prominent among them was the "gouty" class. Nearly all these patients with these low fevers had the gouty diathesis and I obtained wonderful results when I went back ofthe fever and attacked the constitutional trouble. The gouty diathesis lends very material aid to "combustion" and "acid productions" in my fever theory, which is as follows: malarial germs as other poisonous elements increase tissue destruction. This takes place back in the extra-capillary tissues and means of course oxidation. The products of oxidation are acid and therefore there is lessened alkilinity outside the blood vessels. By the law of osmosis these acidised fluids pass into the blood (it being strongly alkaline) and diminishe alkalinity. This in turn reacts upon the thermic centers and causes more fever developments. You now readily see that in all these cases we will surely get splendid results from the judicious use of alkalies.

Dr. Murphy: I want to say a word about auto-infection which perhaps has some bearing on this subject. These poisons whatever they may be, ptomaines, urea, or other excrementious products, have a profound effect on the mind, frequently producing great mental disturbance. All of us have seen children with high temperatures coming on suddenly after some error in diet which are completely relieved by a cathartic. In ephemeral fevers constipation is present and in these cases, as in children the symptoms rapidly subside after the bowels are freely moved. It may be that this may account for some obscure fevers. The experience of Dr. Duffy makes me think that an excess of uric acid in the blood may produce elevation of temperature just as other poisons that I have spoken of above, this without other signs of gout. I know the mental symptoms of chronic narcotic drug poison are quite similar to those of auto-infection.

Several cases of insanity from grip I saw had similar symptoms.

A case I saw in consultation whichhad many signs of tumor of thebrain, in fact the diagnosis of tumor had been made by someof the best medical men in the State, made a rapid and complete recovery after the narcotic drugs he had been taken for some time, were withdrawn. I should like to hear this part of the subject discussed further by the gentlemen present; I want to know something of it from a general practitioner's standpoint. For several years psychiatrists have been studying it and its influence on the brain, it may have effects on other tissues of the body.

I saw a case of what seemed to be mild mania with some stupor in a gentleman 77 years of age which seemed to me from the history of the case with the symptoms to be one of auto-infection. We found on examination of the urine a small quantity of albumin with some granular casts. The sp.gr. about 1020, urea normal in amount but the whole quantity of urine passed was much less than it should have been, thus showing a diminished quantity of urea excreted. Lithia water was prescribed, not that any effect was expected from the lithia, but the normal effect on family and nurses would more likely cause them to administer this "mineral water" more freely. This gentleman soon recovered his mental faculties and is now in his usual health. These poisons, ptomaines, urea, etc., as I have said, have some symptoms of narcotic poisonings. I have been surprised to find of late years since a more careful examination of the patients admitted in the State Hospital have been made to find how very many of them have albuminous urine. Further study of all this will no doubt enlighten us all.

Dr. Parrott: I would like to say that Prof. Elliott instituted a series of experiments in regard to the drinking water, and found that in several of these cases that as soon as filtered or boiled water was used, the fever discontinued, showing to my mind that in treating this fever we killed the germs, but at the same time gave the patient another dose of malaria in the drinking water.

Dr. Crowell: This is very interesting to me for several reasons. The first examination of the blood gives us a positive diagnosis, and we know what we have to deal with. We know that there are some cases where quinine does not destroy the plasmodium of malaria, and by this examination, we know at once how to treat it. We all know that the earlier we know that it is typhoid fever, the better it is.

Dr. Royster: The discussion has wandered somewhat, but as the president has said, it is an informal one. I have only two or three things to say in closing the discussion. I want to call attention to something Dr. Duffy said, and that is that typhoid fever often begins like malarial fever clinically in children. The prodromes are frequently absent, the fever begins suddenly and runs high, sometimes with a marked chill, and there is not a physician in the world, who would not say that such a case was malarial fever; but if he subjected it to a microscopic examination and found no plasmodia in the blood, he would not. If you find the plasmodium absent, you conclude that your patient has typhoid fever. On the other hand, you find in some adults a fever beginning exactly like typhoid fever, with prodromes, no chills, steady fever,—continued. An examination of the blood in cases like that sometimes shows the blood swarming with plasmodia; you give quinine, and the patient gets well. I feel that such discussions are interesting, and I am grateful to the gentlemen who have engaged in the discussion this morning.

Dr. Hays: I would like to ask Dr. Royster if he has ever found the plasmodium of malaria in a case which afterward turned out to be a typical case of typhoid fever, i.e, if he has ever found the plasmodium and baccilli together. I have seen a number of cases starting with a high temperature, raging headache, not influenced by quinine. We give quinine, and if they have malaria, it runs its course and then the typhoid develops, or that which the profession called typho-malarial fever, or bilious fever, and I must confess that I am at sea as to what they really are. I would like to know if he ever found the plasmodium of malaria in these cases at first. I know that in the end the typhoid fever symptoms are there, and you remember the remarks of Dr. Booth. In about 100 cases in the hospital, four or five were typical cases of typhoid fever. I believe that these were all due to the same thing, and that is to the drinking water. It was found to contain bacteria, and the water was changed and the case of fever stopped. In my opionion, they were all typhoid fever, though I have never been able to persuade Dr. Booth that that was the case.

Dr. Royster: In answer, I will say that in my work of examining the blood in cases of continued fever, I have never found an association of the two germs. As I said in my paper, whenever I found a negative result as to the plasmodium, it proved to be typhoid fever; with a positive result, it proved to be malarial fever and was cured by quinine. In Johns Hopkins Hospital, in over 600 cases under examination, in only one was found an association of the two infections.

THE MICROSCOPE IN DIAGNOSIS OF MALARIA.*

BY R. H. WHITEHEAD, M. D., Chapel Hill, N. C.

MY excuse for offering any remarks upon so trite a subject as the diagnosis of malaria is two-fold. In the first place, I believe that the discovery that malaria in all its manifold manifestations is invariably accompanied by the presence of an animal parasite in the blood marks the most important advance which has been made in clinical diagnosis for many years; and second, I am convinced that many of us, perhaps the majority of us, are neglecting a very valuable means of diagnosis. While, as a rule, the diagnosis is easily made from the symptoms alone, yet there are many cases in which the clinical symptoms leave us in doubt, puzzling cases which all of us who practice east of the Blue Ridge occasionally meet; cases which would cause us much less worry if we were only certain that they were "nothing but malaria." On the other hand, there can be no doubt that many cases of disease are incorrectly considered malarial. Many a case of incipient tuberculosis has been diagnosed and treated as malaria, many a case of syphilitic meningitis has been termed brow ague, and many a case of septic infection has gone to the grave with the diagnosis of malaria.

With our present knowledge, such mistakes need no longer be made. We may with confidence rely upon the fact that if the case be malarial, the parasites are in the blood, and a careful search will find them.

Of course there are many of us who have not enjoyed the benefits of the microscope, but there are others who are familiar with that instrument, but who yet seem to think that the microscopic examination of the blood is a sort of diletant procedure on which hospital internes may while away superfluous time, but that it is of no practical use to the "busy practitioner." Others fear lest the technique may be too difficult, or require too great an outlay of time, etc. On the contrary, nothing could be more intensely practical, and it is to the "busy practitioner" of all men to whom it is most useful, nor need fear of difficulty of technique deter any one who is familiar with the microscope, for the method is simple and the detection of the parasites is in many instances easy. I need not here attempt to give any description of the parasite nor discuss the question as to whether its different forms are connected with different types of the disease, for the detection of any form is sufficient to establish the diagnosis; but it is well to emphasize the fact that the small intra-cellular variety, (aestivo-autumnal) which is very easily overlooked, seems to be the causal agent concerned in the production of the severer and irregular forms of the disease. In the most intense cases of malarial infection we may have to search very patiently and carefully before we can find these small organisms. To all interested in the subject, I can not too earnestly recommend the Fifth Volume of the Johns Hopkins Hospital Reports containing the study of over six hundred cases of malaria by Thayer and Hewitson. It is exhaustive of the subject, and the paintings of the parasites by Mr. Max Brödel, the artist to the hospital, are alone worth the price of the book, so true to nature are they. Since the method of examination seems to be not generally known, I shall describe the one which I have found most satisfactory. In the first place, we may say that an oil immersion $\frac{1}{12}$ objective is necessary, although the discovery of the parasite by Laveran was made with a $\frac{1}{6}$. Perfect cleanliness of the slides and cover glasses is absolutely essential; to obtain this, it is well to boil them in a weak solution of sodium bicarbonate, rinse off in water, and then wash them in alcohol. They may be kept in alcohol, or, after drying well with a clean cloth, may be preserved dry for future use. The blood may be best obtained from a slight puncture of the lobe of the ear. Pinching up the lobe between the thumb and index finger of the left hand, after having first washed the lobe well with alcohol, the puncture is made with a clean needle. Gentle squeezing will cause a drop of blood to appear, which is wiped away. A second drop being forced to the surface, the cover-glass, held in forceps, is gently touched to the top of the drop. A small drop of blood adheres to the cover-glass, and when the latter is laid gently with drop down on the slide, spreads out between the slide and cover glass into a thin layer one corpuscle thick. It is now ready for examination and the corpuscles will preserve their shape for a half an hour. If one wishes to preserve the preparation longer, a little melted paraffin may be edged about the cover-glass, and in this the blood will keep fairly well for several hours.

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*Read before the North Carolina Medical Society June 8, 1897.

As I have said, the method is simple, but it requires a little practice, and careful observance of the steps just described in order to do it nicely. If the glasses are not perfectly clean, the blood will not spread; under such circumstances, we should not press upon the cover-glass and so spread the blood by force—for by so doing the corpuscles would be disturbed, and misleading appearances be produced. It is best to hold the cover-glass with forceps, for the moisture from the fingers may soil it. Only a small drop of blood must be taken, for a large drop will not spread sufficiently thin.

In such preparations the larger varieties of the parasite are readily detected, but the small aestivo-autumnal forms may be easily overlooked, or confused with artificial appearances in the blood corpuscles. It is, therefore, well in doubtful cases, to stain the organisms. This may be done as follows: The blood is obtained on a cover-glass in the way just described, and is allowed to spread by being placed upon another cover-glass. The two covers are then slid apart, and the thin layer of blood which remains adhering to each is allowed to dry for a moment or two in the air. and then fixed by immersion in equal parts of absolute alcohol and ether for half an hour. The layer of blood is then stained for one minute in a concentrated solution of eosin, marked, and stained for another minute or two in a concentrated solution of methylene blue. It may then be placed upon a slide and studied. The red corpuscles are stained red by the eosin, while the nuclei of leucocytes and the parasites are stained blue. While my own practice is a very limited one, this method has been several times of great assistance to me. For example, early last fall four cases of fever developed at the University at about the same time in four students from different parts of the State, all bearing a close likeness to typhoid in its early stages. After a week or two of prodromes, including nose bleeding, a temperature of 100°F. would be noted gradually rising without remissions to 103° or 104° by the fourth day. But the microscope showed the presence of the small intra-cellular parasite in each case, and after five grains of quinine had been taken every four hours for five days, the fever ceased.

Here in North Carolina we should be especially interested in this subject. We hear much about typho-malarial fever. If there be such a disease, that is, one in which the malarial and typhoid parasites occupy the same host, then the microscope should find the malarial parasite in the blood. In this connection it is interesting to note that out of the large number of cases of typhoid fever treated at the Johns Hopkins Hospital, is only one case were the malarial organisms found.

We should be still more interested for another reason. For many years there was a standing prize offered by a member of this Society for an original article on Hemorrhagic Fever. That prize, I believe was never awarded. Right here in our midst is a golden opportunity for somebody to make a valuable contribution to medical science. The microscope alone can disclose the secrets of this disease, of course the study of its pathology demands much more than the microscopic examination of the blood and urine. The liver, spleen, kidneys and brain of fatal cases must receive careful study. I should be under obligations to anybody who would send me small portions of these organs. They should be preserved, not in alcohol, but in a solution of potassium bichromate, ten grains to the ounce of water, to which it would be well to add five grains of sodium sulphate. My own observation of hemorrhagic fever has been limited to two cases; one occurred several years ago when I was unable to study it. In the other case the small intra-cellular form of the parasite was present. The urine, although of a deep blood-color, contained no blood corpuscles. So that this case at least, was malarial and the blood color of the urine was not due to hemorrhage from the genito-urinary passages, but was due to the coloring matter of broken down corpuscles, set free in the blood and eliminated by the kidneys.

DISCUSSION.

Dr. Hines.—While the microscope is doubtless an accurate method of diagnosis, the physician should learn practical diagnosis at the bedside and not depend on the microscope.

Dr. Anderson.—I agree with the gentleman in regard to the clinical diagnosis of these fevers, but I do not agree with him when he says that there is too great a tendency to depend on the microscope in the diagnosis of malarial fever or typhoid fever. I say the tendency is not sufficient. I know that in my own practice and in the practice of some of my fellows, we have had cases where we didn't know whether we had typhoid or malarial fever. I wish the tendency greater in Wilson to use the microscope. I want to make a statement from a letter which I received from Dr. Pate. Dr. Pate writes: "I have been using Wyatt Johnson's modification of Widal's serum test for typhoid fever for the past seven months—have examined 22 cases diagnosed clinically to be typhoid fever with the following results, viz: Agglutination occurred in sixteen of these cases within the first week.

Agglutination failed in one case within the first ten days, whose subsequent clinical history indicated typhoid fever—was not tested later. Serum test negative in 4 cases. In all of these the malarial parasite was present and yielded to quinine in 10 to 14 days. The remaining one case was that of a young man sent from town to his country home by an able physician with a clinical diagnosis of typhoid fever. The serum test was negative. An examination for the plasmodium of malaria was also negative. Made a culture from a moderately inflamed pharynx, from which he had suffered since his illness, and found streptococci. His temperature was normal after 48 hours—antiseptic local treatment—ten days from the time he was taken. His continual rise of temperature and nervous symptoms were all due to the streptococcal sore throat." There would have been a serious mistake if he had relied on clinical diagnosis alone.

Dr. Hines.—Typho-malarial fever was a name invented and given by Dr. Woodward. He thought that there was such a fever, but before he died he admitted that he had made a mistake, and said that he was confident that there were only two distinct types—typhoid and malaria. He invented the name, but demonstrated the truth that there was no such fever. In a microscopic test in New York the doctor proved that a man could have typhoid fever and after the recovery from the symptoms, have regular malarial fever. The reason that it is thought to be a separate fever is because a man can have the two fevers entirely distinct. The doctor seems to have misunderstood me. I said that the great majority of the physicians must not depend on the microscope. You must, it seems to me, examine a man thoroughly, examine him so thoroughly at first that you would not have to examine the blood to find out what he had.

Dr. Whitehead: I want to say this in defense of my paper. I think we all want to do what is best for our patient, consequently we use every means to make a diagnosis. If we rely on clinical symptoms alone, we are bound to make a mistake. My paper was not written from any knowledge of books; it was written out of my own experience. I know that it is not a hard thing to do, and that it does not require any great knowledge of the microscope to do it.

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AN INTERESTING CASE OF APPENDICITIS.*

By A. J. Crowell, M. D., China Grove, N. C.

THIS report is not submitted on account of the recent discovery of this disease or in support of some new line of treatment, but to impress the paramount importance of an early diagnosis, and the good that may result therefrom, even under the most adverse and hopeless circumstances. The case which I refer to is as follows:—John L. Oct. 24th, white, occupation, farmer. Father died from fracture of skull. Mother living and in good health. Three sisters and one brother living, all of whom are in good health. No hereditary history. On the evening of Feb. 11th patient complained of uneasiness in bowels and took pills which operated the next morning. In the afternoon of the 12th, he was seized with pains in the right iliac region which radiated over the entire abdomen, and began to vomit which continued more or less until after the operation. Dr. McW. was called about 9 p. m. and found him in the following condition:—expression anxious, suffering excruciating pain in the right iliac region which radiated to all parts of the abdomen. Legs flexed and abdominal muscles in tonic condition with exceeding tenderness, throughout abdomen. Tongue furred, temperature 101° pulse 120. Satisfactory examination could not be made on account of extreme abdominal tenderness, but deeming it a case of hæpatic colic, Dr. McW. administered ½ gr. of morphine, hypodermically, with directions to give oil, followed by enemas if necessary, and to use turpentine stupes over right iliac region. The oil was not retained.

Early the next morning the Dr. returned and ascertained that the patient had rested but little during the night.

Temperature was 120° pulse 130, muscles in tonic contraction, and pain still severe. Tenderness marked in right iliac region. One half gr. of morphine was again given. Enemas of oil and glycerine were administered with a long tube a number of times without any result. At 3 p. m. another ½ gr. of morphine was given. At 6 p. m. the patient felt his bowels give way, as he expressed it, and thought he would have an action. Temperature declined rapidly to 97⅗. Pulse became weak and thready and patient was soon bathed with perspiration, which indicated collapse from perforation.

On morning of the 14th the writer was called in consultation and found patient somewhat recovered from shock, but had every symptom of an acute attack of peritonitis.

Pulse 130. Temperature 101½° with a great deal oftympanitis, and abdominal tenderness was so marked that it was impossible to make a satisfactory examination without the use of an anæsthetic. Under an anæsthetic a small tumor was found in the region of Mc Burney's point, and diagnosis of appendicitis with peritnoitis was made. Immediate operation was advised. Having no instruments or sterilized dressing with me, I returned home for instruments and dressings while patient was being prepared for operation. On my return at 4 p. m. I found they had been unable to get any assistance on account of neighboring physicians being absent from home. Deeming immediate operation very important, instruments and towels were boiled, patient, anæsthetized and operation begun. An incision about four inches long was made, commencing about one inch above a line drawn from the anterior superior spinous process of ilium to the umbilicus parallel to and just to the right of the rectus muscle avoiding the sheath of the rectus as hemorrage is usually qreater when incision is made through the sheath. On reaching the peritoneum it was seen to be highly inflamed, and when incised a large amount of seropurulent fluid, which was very offensive escaped from abdominal cavity. Further examination showed that the intestine, omentum and peritonum were all in a state of high inflammation and adhered together. It was then seen beyond a doubt that there was a general septic peritonitis. Hence the rush with the operation and the crudness with which it was done. The adhesions were broken up and the appendix reached. It was about 5 inches long, very much enlarged, perforated and gangrenous. A ligature was carried around the base of the appendix about ¼ inch from cæcum and appendix servered as close to the ligature as possible. On examining the appendix a cholesterine about the size of a pea was found near the place where the appendix was perforated. In order to cut short the operation the stump was returned without further treatment. The abdominal cavity was thoroughly flushed with steriled hot water, drainage tube inserted and wound closed with great difficulty by interrupted sutures through skin, muscle and peritoneum and dressed with steril dressing. One fourth gr. of morphine was administered and patient had a good night's rest. There being no nausea the following morning the patient was put on a small amount of milk and lime water every two hours. On the afternoon of the same day the temperature reached 99⅗ ° and, the attending physician being a great advocate of nuclein, one nuclein tablet every two hours was added to the treatment which was continued till patient recovered. The following day, Feb. 16th the temperature was 99°. The 17th the temperature rose to 99⅘ when the abdominal cavity was washed out with a normal sterilized salt solution, woun ddressed and the temperature again came to normal, pulse being 80, and remained so until the 21st when it ran up to 101, after taking a large dose of salts. After the discharge of a large amount of hard fecal matter, the temperature returned to normal. The wound was also dressed at this time and tube remcved.

From this date the patient's recovery was uneventful and complete.

The points of interest in this case are first, etiology; 2nd recovery after perforation and general peritonitis.

INCREASE OF INSANITY AND CONSUMPTION AMONG THE NEGRO POPULATION OF THE SOUTH SINCE THE WAR.*

By Thomas J. Mays, A.M., M.D., Professor of Diseases of the Chest in the Philadelphia Polyclinic, and Visiting Physician to the Rush Hospital for Consumption in Philadelphia.

(Read before the Section of Neurology and Medical Jurisprudence of the American Medical Association, June 3, 1897.)

STATISTICS gathered from the superintendents of Southern hospitals for the insane show that both insanity and pulmonary consumption increased disproportionately among the negroes of that section of the country since the close of the civil war. Thus according to the United States census there were in 1860 only 44 insane negroes in the State of Georgia; in 1870, there were 129; in 1880, 411; and in 1890, 910. In North Carolina there were in 1880, 91 colored insane; in 1885, 144; in 1890, 244; in 1895, 307; and in 1896, 370. In Virginia before 1865 there were about 60 insane negroes in the asylums of that State and now there are over 1000. In the Eastern Hospital for the colored insane in North Carolina, consumption caused 14 per cent. of the total number of deaths, in 1884, while in 1895 it produced 27 per cent. of all the deaths, and this in spite of a reduced general mortality rate. In the Mississippi Lunatic Asylum from 1892 to 1896, consumption caused 42 per cent. of the total number of deaths among the negroes, or an increase of 22 per cent. over the death rate from this disease among the white population outside of hospitals for the insane (it being of course well known that insanity predisposes the phthisis) if the latter is estimated at 20 per cent. In the Alabama Insane Hospital during three years and nine months beginning October 1, 1890, there occurred 295 deaths among 1700 white and negro patients. Of the 179 deaths among the white patients, 28 per cent. were due to tuberculosis, and of the 116 deaths among the negroes, 42 per cent. were due to the same disease.

From this and other evidence which is presented, it is concluded that both of these diseases have disproportionately increased since the war, and that in all probability the causes which led to one also led to the other disease. The writer holds that the cause of phthisis resides in a disintegrated nervous system, and cites a number of concurrent authorities, as well as clinical and pathological data, to prove his position; and, among other conclusions, he draws the following: That both consumption and insanity are closely allied, both in personal and in family history, to idiocy, hysteria, epilepsy, asthma, and to other diseases of the brain and spinal cord; that they are both produced by syphilis, alcohol, overwork, business vicissitudes, domestic trouble, mental anxiety, grief, disappointment, and excesses of all sorts,—in fact, by any agent or influence which vitiates the brain or nervous system; and that those who are confronted by a new and higher civilization, and who are compelled to adjust themselves to these new relations, are excessively liable to fall victims to insanity and pulmonary phthisis.

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*Authors Abstract.

The condition of the negro is viewed from these premises. Civilization is regarded as an accumulation of force, and the older the civilization the greater its momentum and the higher its plane; and when a lower civilization is precipitated in the midst of a higher, like in the case of the negro, it is the throwing together of two forces which differ in power and in rate of motion The lower, in order to preserve itself, must make an effort to adjust itself to the course and changes of the higher movement, and the strain which is occasioned by this effort of adaptation falls on and vitiates the brain and nervous system, and this in turn gives rise to insanity and phthisis. The vices of alcoholism and syphilis, which are readily acquired by these people, accelerate the advent of these diseases bydestroying the integrity of the brain and nervous system.

Viewing the condition of the southern negro from these standpoints, it is perfectly obvious why insanity should necessarily develop, and on no other grounds can we explain why consumption should follow in the wake of insanity. Those who were able to realize all the factors which would be called into activity by the environmental change of the negro after the war could, at the time it was made, have foretold the inevitable results which are now too plain to every one. It is in part a repetition of what happened, and now happens, to the aborigines of North America, Australia, and New Zealand, who in their unequal warfare with modern civilization have been and are being fast decimated and exterminated by pulmonary phthisis.

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., Editor.

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This Journal is published on the fifth and twentieth of each month, and any subscriber failing to receive his copy promptly, is asked to announce the fact to this office.

Cuts will be provided for any original communications (sent to this Journal only) requiring illustrations, free of cost to the author.

Secretaries of County Medical Societies in the Carolinas are asked to furnish condensed reports of their meetings to the Journal.

All communications, either of a literary or business nature, should be addressed to, and any remittances by P. O. Order, Draft or Registered Letter, made payable to Robert D. Jewett, M.D., P. O. Drawer 825, Wilmington, N. C.

Editorial.

CITY WATER SUPPLIES.

Only within the last few years have the cities in North Carolina taken steps to introduce systems of public sewerage and water works; and yet there is nothing so necessary to the upbuilding of a city and the health and comfort of the citizens as a plentiful supply of wholesome water and a perfect system of sewerage. These are expensive things in the matter of first cost, but they are well worth, in the end, all they cost. Take a city of 20,000 inhabitants and let the death-rate be decreased only two or three in the thousand per year. There would be forty or sixty lives saved each year—400 to 600 in a decade. Place these human lives in one side the scales and who would dare attempt to balance them with the cost of a system of water works? And yet the introduction of a supply of good water for bad has made, in innumerable instances, a greater reduction in the annual death-rate than this. The coast towns in North Carolina must depend upon artesion wells for a supply of suitable water, and the water works should be under municipal control. It is useless to expect a corporation to carry out faithfully its contract with the city.

We are pleased to note that the State Board of Health has ordered an examination of the water supplies of all the cities in the State. This is a move in the right direction and there will be revealed much carelessness and lack of progress on the part of citizens of many towns, and many failures on the part of water-works companies to carry out the provisions of their contracts with the cities. The Board of Aldermen of the City of Wilmington have, from time to time, hauled up the local water works company for failure to carry out the provisions of their contract with the city, but nothing, so far, has ever come of it, certainly nothing in the way of improvement in the water supply. The matter has been recently agitated by the present Board, and we notice in the newspaper report a remarkable statement by the Superintendent of the water works company to the committee who waited upon him. He said that he had never known of a case of sickness from drinking the water and that he had never heard a physician express the opinion that the water was not suitable for domestic purposes. And this, in the face of the fact that the water is pumped from the Cape Fear river just at the city limit. With the flood tide all the sewage of the city passes this point within a few minutes after it is poured into the river; and with the ebb tide there passes the water from a large creek which drains all the city cemeteries and several slaughter houses, and farms which use the night soil carried from the city. We do not believe that the people of any other community would be so long-suffering as are those of Wilmington in regard to their water supply.

The city of Wilmington, and all other coast towns of any size should appropriate a sum of money for the sinking of artesian wells. In no other way can we expect to secure water suitable for domestic use, and the money expended will be well spent, and will be returned many fold in the prevention of disease and the saving of valuable lives. We want to see the results of the examinations by the State Board of Health, for we believe that they will reveal such a deplorable state of affairs that the municipal authorities will be moved, either through interest in the welfare of the citizens or through shame, to make vigorous efforts to secure a supply of pure water.

In this connection, we notice that the Board of Health of Asheville have taken steps to undo, as far as possible, the evil that was done that city by the Charleston *News and Courier*. A sample of water from the Asheville water works was sent to the bacteriologist of the State Board of Health for examination. Notwithstanding explicit instructions as to the method of packing and shipping the sample, it was improperly done by the person having it in charge, so that the sample was received by the bacteriologist in bad condition. He made the examination, though, and found a large number of bacteria, and this report was published in the biennial report of the Secretary of the State Board of Health, unwisely we think, although attention was called to the fact that the sample had been received in bad condition. The *News and Courier*, either intentionally or very carelessly, in its criticism on this report, omitted to state that the sample of water was received by the bacteriologist in bad condition, which statement would have been evidence to any intelligent person that the examination amounted to nothing. A committee, consisting of Drs. M. H. Fletcher, Chas. L. Minor and C. V. Reynolds took a sample of water from the city mains and sent to Professor A. C. Abbott, of the University of Pennsylvania, with a sworn statement that the water sent was allowed to flow into the container directly from the city main. The following are the "indications" appended to the examination by Dr. Abbott: "Chemically this is a (pure) water according to the classification of Dr. Chaumont. The result of the bacteriological examination—191 bacteria to the cubic centimeter—is also exceptionally good for domestic water supply. Altogether we consider the result of the examination to be indicative of a very satisfactory water."

Reviews and Book Notices.

The Menopause.—A consideration of the phenomena which occur to women at the close of the child-bearing period, with incidental allusions to their relationship to menstruation. Also a particular consideration of the premature (especially the artificial) menopause. By Andrew F. Currier, A. B., M. D., New York City. Cloth, octavo, 309 pages. Price $2.00. D. Appleton & Co., New York. 1897.

There has not been much written in the English language upon the subject ofthe menopause. Tilt's work and an English translation of the work of Börner some fifteen years ago being the last that have appeared. The author strongly protests against the tradition that has been current from time immorial among both the laity and the profession that the menopause is an experience fraught with peril and difficulty. The object of this work, he says, is to dispel, if possible, from both the lay and the professional mind, the idea that there is any especial danger of the devolopment of malignant diseases during the menopause, excepting in those who have a predisposition to such disease either by heredity or by virture of a depraved condition of their tissues from other causes. He has given the subject close study, and has presented it in an attractive and scientific manner.

The volume is beautifully printed and well bound.

Warner's Pocket Medical Dictionary of Today.—Comprising pronunciation and definition of ten thousand words and terms used in medicine and associated sciences. By William R. Warner. Price .75 cents. William R. Warner & Co., Philadelphia.

The size of this little dictionary makes it convenient to be carried in the pocket. It is printed on good paper and well bound. Many very common words are omitted simply because they are so familiar that it was thought useless to take up space with them. The definitions are very concise, but in many cases seem to be too brief, the reader being supposed, probably, to know the proper definition. The definition for "mastoid bone" for instance, is "Foramen of temporal bone." It was thought necessary to give a more extended definition of "virtuous", which the author says is "applied to a female who does not have connection with other than her husband." Does he mean to infer that the term may never be applied to males? However the little book is not intended as an encyclopedia, but to be carried in the pocket or kept on the table for easy reference, and it will prove very useful in this way.

Correspondence.

THE ANTIVIVISECTION BILL.

Editor North Carolina Medical Journal:

DEAR SIR:—Enclosed you will find a copy of resolutions recently passed by the Buncombe County Medical Society pertaining to the antivivisection bill pending before the Senate.

We have mailed a copy of these resolutions to each congressional member from this district and have also notified several of the County Societies of our action, thinking they may see fit to do likewise.

It seems to me that it would be well to try and induce all N. C. Societies to take some action so that as many of our State Members as possible may have at least some idea of the wish and the feeling of the profession of their respective districts.

Fraternally yours
C. P. AMBLER.
ASHVILLE, N. C., July 19 1867.

Hon. Richmond Pearson, M. C. Washington, D. C.

DEAR SIR:—The Bumcombe County Medical Society in regular neeting assembled, July 5th, 1897, appointed a committee to draft resolutions pertaining to the Antivivisection bill (1063) now pending before the Senate and House.

WHEREAS, Senate bill 1093 (formerly Senate bill 1552) has been reported favorably to the United States Senate and,

WHEREAS, we believe that its passage would seriously interfere with the progress of practical medicine, and therefore be a public calamity; Therefore be it

Resolved, That the Buncombe County Medical Society, with a full knowledge of the contents of Senate bill 1063, most earnestly protests against its enactment; and

In as much, as animal experimentation has had a very large share in the development of modern surgery;

In as much as the question of the introduction of animal ligatures upon the human being was first shown to be practical by animal experiments;

In as much as abdominal and cerebral surgery have only been brought to their present exactness and success, by first experimenting upon lower animals;

In as much as cerebral localization, antisepsis and bacteriology would not exist as sciences, nor would accurate modern surgery, and a large part of modern medicine be possible without first demonstrating the same upon the lower animal;

In as much as advancement in science for the relief of human suffering requires experimentation, and as it obviously would be impossible or unjust on the part of the surgeon to first apply his theory upon mankind, and finally,

In as much as we are now led to believe from the results already accomplished that great discoveries will be made, within the next few years, in the treatment and prophylaxis of such diseases as tuberculosis, typhoid fever, cholera and the like; and while the passage of such a bill as contemplated would greatly restrict such scientific investigation and almost prohibit it in the District of Columbia, we would earnestly commend these resolutions to your favorable consideration.

The foregoing resolutions were in regular meeting July 19th, 1897, adopted by unanimous vote of the society.

Enclosing a reprint of the bill in question, we remain,

Very respectfully,

Committee. { JOHN H. WILLIAMS,
FRANK P. MERIWETHER,
C. P. AMBLER, Chairman.

IS IT A DISTINCT FEVER?

Editor North Carolina Medical Journal

This immediate section has for four or five years past been the seat of acute disease, which attacks so many persons that I have been speculating as to whether there is a local cause for it; and therefore address this description to your paper, hoping that some of your many readers may feel enough interest to notice it.

While the cases are of all degrees of severity, the symptoms are so well marked and regular that there is no excuse for a mistaken diagnosis. The disease begins exactly like an acute gastric catarrh. Slight chilliness is accompanied by a high fever intense aching in the limbs, back, head, and eyes, usually nausea and sometimes vomiting, and frequently during the first and second day there is some diarrhea. The tongue is very broad and thick and is completly covered with a pasty white or yellowish white fur. There is very great restlessness, sometimes severe thirst and for a few days loss of appetite. The taste is described as being "horrible"—a brassy, metallic taste. There is a very pronounced odor which resembles that which surrounds diabetic patients.

This condition lasts from two to six days, then the symptoms undergo a very pronounced change. The temperature which is at fiirst very high drops to 99.5°—101°F. All the aching, restlessness, etc., subside. The tongue is dry, the edges and tips very red, the middle slightly coated. The soft palate and fauces have a yellowish appearance and are described as feeling as if they had been scalded. There is soreness under the sternum and tenderness over the stomach, liver and small intestines.

At the time digestion is wholly suspended. Even in mild cases the smallest quantity of food occasions distress, and aggravates all the symptoms for several hours after it is taken, although, frequently, there is a strong desire to take food. The peristaltic action is entirely suspended as is all secretion. The cases give you the impression of having a stomach and bowels whose mucus coat is swollen, dry and perfectly lifeless.

During this stage it is sometimes very difficult to procure a movement from the bowels. I have seen a patient after taking ten doses of saline carthartics and oil, finally, after using an enema, have a small stool composed of dry scybalous masses, without a particle of moisture except the fluids of the enema.

During the first stage of this disease, the heart is very irritable. Turning in bed or attempting to sit up causes a very disagreeable palpitation. Later this palpitation is frequently induced by the ingestion of the smallest quantity of food. Throughout the course of the sickness an effort to sit up is accompanied by vertigo or other disagreeable sensations in the head.

The duration of this second stage, while hardly influenced by treatment and nursing, may be stated to be from seven to fourteen days. This with from two to six days for the violent stage make the duration of the fever from nine to twenty days from the commencement until convalescence is established. Yet no acute disease that I have ever seen is so much affected for good or ill by the treatment. I have seen the attack prolonged ten days by the ingestion of half an egg.

The convalescence in slow. The patient regains his strength slowly,and his digestion is very much impaired for months. In fact only by the greatest care can it be restored.

The treatment which has been found most successful is, in all stages, complete rest. For severe vomiting and thirst, crushed ice is the best remedy, and I allow my patients to take it freely. Acetanilide combined with bromide of soda, and small doses of pulverized ipecac. compound usually relieves pain and quiets the patient. So that he can sleep well enough. Also small doses of calomel and podophyllum seem to exert a good influence. This is the treatment of the first stage.

After this stage is passed and is succeeded by the stage of low fever, no secretion and no action, medicines are of slight, if of any, value. During this stage if the patient is kept perfectly quiet in bed, allowed to take only the blandest liquids and those in small quantities, he will do far better and recover much more quickly than if he is constantly dosed. I attempt to procure a stool once in 48 hours, and while I sometimes give phosphate of soda, or rochelle salts for the purpose, I rely mainly on enemas.

Fearing lest I make this article too long, I have merely outlined the symptoms, though I hope sufficiently for any physician to obtain an idea of the disease. Three years ago the doctors of this section almost unanimously called it typhoid fever. To-day, they are as unanimous in saying that it is not typhoid fever, but go no further.

The disease is rarely fatal. The only fatal cases which I have seen have been among those, who, after the first stage ended felt so much better that they determined to resume work. Any exertion at this time is almost sure to lead to a ten-fold increase in the severity of the symptoms. In fact long after convalescence has been established, over-exertion will cause a return of all symptoms.

I forgot to say at the proper place, that there are no daily exacerbations, or if any very slight. The temperature remains very nearly the same day and night. Nocturnal delirium, picking at the bed clothes and subsultus are frequently present in cases not otherwise grave.

Occasionally, during the last four years, I have seen articles in diffierent journals describing this fever, all of them from the Piedmont section of Virginia, Tennessee and North Carolina. Is the disease peculiar to this section? If so, what is the cause?

I would be glad to have some of your readers tell me whether this is a common affection which I have mistaken for an unusual disease. J. R. C., M.D.

Newton, N. C.

Therapeutic Hints.

CHRONIC RHEUMATISM.

℞—Potassii iodidi . . . . ʒ iij.
Vini colchici sem.,
Tinct. opii camph . . . . aa ℥ ij.
Tinct. stramonii . . . . . ʒ vi.
Tinct. cimicifugæ . . . . . . ℥ iij.

M. S. A teaspoonful thrice daily.—*Med. Record.*

ERYSIPELAS OF THE FACE.—The *Presse Medicale* recommends the following formula:

℞—Carbolic acid . . . . .
Tincture of iodine . . .
Alcohol . . . . aa 30 grammes.
Oil of turpentine . . . . 60 grammes.
Glycerin . . . . 90 grammes.

M. The lesions are to be painted with this liniment every two hours, and covered with aseptic tarlatan.—*Med. Herald.*

SOLUTION FOR REMOVING NITRATE-OF-SILVER SPOTS.—

℞—Bichloride of mercury, 5.0 grammes
Muriate of ammonium, 5.0 grammes
Distilled water, ... 40.0 grammes

Apply the mixture to the spots with a cloth, then rub.

This removes almost instantaneously even ancient stains on linen, cotton, or wool. Skin stains thus treated become whitish-yellow and soon disappear.—*Med. Bulletin.*

Abstracts.

ANTIFEBRINE POISONING FROM A BLISTERED SURFACE.—Dr. E. S. Boland (*Boston Med. and Surg. Jour.*) reports a case in which there was profound poisoning from the absorption of acetanilid used as a dressing for an extensive burn. The patient was a young man of nineteen years, and the burn involved the entire back. On the sixth day after the accident, the discharge being rather profuse and offensive, acetanilid had been used to hasten cicatrization and render the wound less offensive. Four hours after the application the patient was in collapse. There was general cyanosis and at times the pulse could not be felt. Only the most powerful stimuli could arouse him and even these failed at the acme of the depression. When aroused his mind was clear and he complained of no pain. The treatment was cardiac and general stimulants and the application of heat and inhalation of oxygen. It was several hours before the patient was out of danger.

NEW ADVANCES IN THE TREATMENT OF FIBROID UTERI.—Dr. Howard A. Kelly read a paper on this subject before the late meeting of the American Medical Association. He predicted that the next great wave of advance would be in the line of conservatism. He advocated conservative treatment of myomatous uteri. He would excise any number of myomata and sew up the incisions. This in large uteri is more difficult than to remove the whole uterus. If the patient's condition is good, and an operation lasts but fifty minutes, and the patient is under thirty-seven years of age, myomectomy should be done. A free incision is made, the uterus is lifted out, and the tumors are then excised. A uterus thus treated is somewhat analogous to a Cæsarean uterus with multiple wounds. The speaker said he had made as many as nine incisions. The cavity is usually not opened, but he has opened it from end to end. In one case the entire anterior wall of the uterus was removed, leaving only the mucous surface of the posterior wall. This operation conserves a natural function which is a distinctive attribute of sex. —*Med. Record.*

THE REDUCTION OF HYPERPYREXIA.—by the cold bath is, no doubt, very efficient, but only if it is carried out. But there's the difficulty. It is frequently not carried out when it should be, and we are, nevertheless, told that it has beend one. Sponging the chest and abdomen with tepid water, or water and alcohol, is a simpler method or temperature reduction, and therefore more apt to accomplish results. If the desired evaporation is too slow, fanning may be added to hasten the process. I have known instances where physicians were so beset with the idea of reducing the temperature in typhoid fever cases by the cold bath, that it was rigidly and pitilessly and foolishly adhered to despite the entreaties of the patient and the invariable subsequent serious nervous depression. This, too, despite the fact that tepid sponging rapidly brought down excessive temperature, was not only not disagreeable to the patient, but was actually looked forward to with pleasure. Such lack of common sense is actually shocking, and it is not suprising that many patients under such care convalesce slowly, or wearily join their ancestors. Whenever possible, therefore, we should at least avoid making an unpleasant impression, if we cannot actually give pleasure and comfort.—DR. A. H. P. LEUF, *Med. Council.*

Miscellaneous Items.

Dr. T. L. Booth, of Oxford, was married July 29, to Miss Irene Grimsley, of Snow Hill, N. C. The JOURNAL begs to extend its hearty congratulations to the happy couple.

Dr. W. C. Ashworth, of Kernersville, N. C., desires to sell his real estate and practice, and will be pleased to correspond with any who desire a good location.

Dr. H. W. DeSaussure, aged 54 years, at Charleston, died S. C., July 10, 1897.

The colored physicians of the country have perfected arrangements, at a recent meeting in Washington, D. C., for a National Association.

We regret to learn of the serious illness of our esteemed friend, Dr. J. H. Tucker, of Henderson. His friends all hope for him a speedy and complete recovery.

The next meeting of the Mississippi Valley Medical Association wlll be held in Louisville on October 5-8. A most successful meeting is promised. Dr. H. W. Loeb, St. Louis, Mo., Secretary.

University College of Medicine, (Richmond, Va.)—The attendance during the last session of this institution was so great, (there being 270 students), that additional teaching facilities were necessitated. Consequently, a large modern structure, with a capacity for 500 students is now being built and will be ready for occupancy at the opening of the next session, September 30th. Every convenience and facility will then be offered medical, dental and pharmaceutical students for the pursuance of their respective studies. The excellent standing of its graduates in all of the departments, wherever they have appeared in competitive examinations, as attested by the public records, bespeaks a brilliant future for the University College of Medicine. The faculty numbers 51 professors and Instructors, with Dr. Hunter McGuire, M.D., LL.D., as president.

DOCTOR:—Your library is not complete without the Hypnotic Magazine. Cost of this handsome monthly, including premium book on Suggestive Therapeutics is only one dollar ($1.00) a year.

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has Gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory orgons. It has also been employed with much success in various nervous and debilitating diseases.

s Curative Power is largely attributable to its stimulant, tonic, and nutritive properties, by means of which the energy of the system is recruited.

s Action is Prompt; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

he prescribed dose produces a feeling of buoyancy, and removes depression and melncholy; hence the preparation is of great value in the treatment of mental and nervous fections. From the fact, also, that it exerts a double tonic influence, and induces a ealthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

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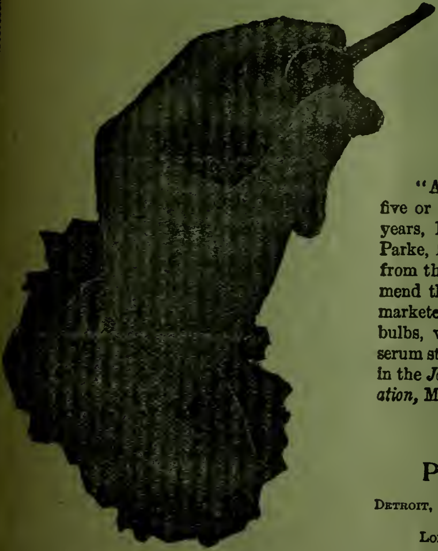

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Original Communications.

SOME OF THE MORE COMMON MICRO-ORGANISMS.

By CLARENCE PORTER JONES, M. D., Rockingham, N. C. Fellow Medical Society of Virginia.

CLASSIFICATION.

ALL micro-organisms which are the etiological factors of disease, putrefaction and fermentation may be placed under the great head *mycetes*, better known as *fungi.*

According to the classification of Bolton, Bacteria is one of the seven orders of the above, and it is principally this order that the surgeon has to do with.

With reference to its subsistence upon living beings, and dead matters, micro-organisms are divided into *parasites* (pathogenic), and saprophytes. Those bacteria growing exclusively in the living body are *obligate*; while those growing either in or outside the body are *facultative parasites.* A larger portion of bacteria require a supply of oxygen for their growth; they are thus termed *aërobic*, while those to which oxygen is hurtful are *anaërobic.*

Those living in either case are *facultative anaërobic.* The earlier classifications of bacteria are still the most important, and have reference to their form as follows:

1. Micrococci, including all spherical forms,
2. Bacilli, including all oval or rod shaped forms,
3. Spirilla, including all forms which are curved or twisted

when in short segments, and embrace some of the important members as the comma bacilla, vibrios spirilla, spirochetæ and others.

Micrococci are divided with reference to shape, being unchanged in name when single, in pairs, *diplococci*, in fours *tetracocci;* formed somewhat like a string of beads, *streptococci;* if in groups, *staphylococci;* and when they are arranged so as to resemble a bale of cotton, are *sarcinæ*.

(a) STAPHYLOCOCCUS PYOGENES AUREUS.

This micro-organism is known as "The Golden Pus-coccus;" and we can safely assert that it is the most common organism of suppuration and processes related thereto. Ogston, who in 1881 published a paper on pus microbes, was its first demonstrator. Rosenbach, Frankel and others have contributed important matter to our knowledge of this germ. This micro-coccus is found in 70 to 80 per cent of all cases attended by suppuration. They are of small size, rounded cells, not the same size absolutely, possesing no power of motion, and are usually in clusters, but may be simply as micro-cocci or diplococci. As a rule you will find them outside the pus, or infected tissue cells, but this is not absolute. This microbe is afloat perhaps the most freely of all others in atmospheric air, especially in closed rooms. Found in all water (except distilled), earth and ice. Staining is easily done by any aniline color. Below is a quick method. Put a drop of pus on a cover glass, place another cover over this, draw them slowly apart. Dry them, and pass three times through alcoholic flame. Stain for ten minutes in warm carbolic fuchsin; wash with alcohol, let dry and mount in Canada balsam. The staphylococci appear as very dark red dots, among lightly stained pus cells. The cultivation is easy, in nearly all media, quickly so in gelatin, small colonies being visible in 2 or 3 days. They liquefy it. It peptonizes albumin, coagulates milk, and when the media is agar agar they retain their virulence for more than a year. We find this germ most common in acute circumscribed abscesses, inflammation and suppuration, lymphangitis, phlebitis, cellulitis, pyæmia, ulcerative endocarditis, septicæmia and osteomyelitis.

There are two other cocci which are closely allied to this type, and are not proven conclusively to be separate types; They differ in color produced—viz., S. B. citreus, and albus. In inoculations both in man and animals, we have produced upon the surface of a wound a progressive suppuration, subcutaneously, abscesses, while injected into blood abscesses in kidney, myocardium, and inflammation of joints.

(b) STREPTOCOCCUS PYOGENES.

Rosenbach discovered this organism occurring mostly in phlegmonous inflammation, and occasionally in conjunction with staphylococci. It is now almost without doubt clearly proven that this germ is identical withthe streptococcus erysipelosus of Fehleisen (the germ of erysipelas). It is believed to be the cause of puerperal fever. The appearance of these cocci is in chains from 2 to 30 or more arranged thus, each coccus forming a link in the chain, and appearing under the microscope as a fine dot, very often a chain of these dots will end in a well defined loop. This coccus is a little larger than the staphylococcus. The same staining as that used for the staphylococcus may be employed, but as a quicker method we can substitue a saturated solution of methyl blue for the fuchsin in the above described method and not heat it. Five minutes is usually a sufficient time to nicely stain it.

In culture media this streptococcus grows very slowly. Under the most favorable circumstances it may take 3 weeks for a colony to become visible. They are'very widely diffusd in nature and found in saliva and upon nasal, vaginal and urethral mucous membranes. Subcutaneously injected, cellulitis results and if they reach the heart, we have an endocarditis. No harm will result from their existence upon the mucous membranes unless they become inoculated through an "infection strium" or abraided surface.

(c) BACILLUS PYOCYANEUS.

Gessard discovered a bacillus which imparted to pus a greenish or bluish color which so stained the dressings etc., used about the infected wound. A strange feature is that it does not seem to in any way affect the reproductive process in a wound.

It is a very short, narrow, rod-shaped organism, possessing active movement; and sometimes it occurs in chains. Often three or four rods are placed parallel with each other. Stain like the preceding organisms. Of course we need not expect to find them unless the pus has the above described color. It liquefies gelatin culture media, and produces a fine green color; the bacillus grows at the deepest part of the thrust.

(d) GONOCOCCUS OF NEISSEN.

This coccus is so named from its discoverer, and is always presented in a case of specific gonorrhœal infection. These occur as diplococci or groups of same. Associated between the cocci are small spaces. After staining they exhibit their characteristic coffee bean appearrance, opposing sides somewhat flattened.

A drop of pus taken direct from the meatus is smeared upon a cover glass, which after drying pass slowly through a flame to fix the film. A few drops of a solution of methyl blue are placed on the specimen for a few minutes, excess of dye washed off, specimen examined with an oil immersion lens or a No 7 objective. Free gonococci appear in pus cells and on epithelium. Saprophytic diplococci are sometimes found in the urethra. They are larger, and never formed in the pus cells.

THE SPECIFIC ACTION OF QUININE IN MALARIA.*

By E. C. Register, M. D., Charlotte, N. C.

THE evident confusion that exists among medical men as to whether malarial fever ever continues after the plasmodium has been removed from the blood, and the tendency to discredit the ability of quinine to destroy this parasite, in all of its forms, is my excuse for presenting a paper on a subject that is, in many respects, already familiar to us.

I am in sympathy with the belief that a malarial fever, without complications, will subside after the plasmodia of malaria disappears from the blood; that we have in quinine the means to completely eradicate malarial poison from the body; that malarial fever occurring in a previously healthy subject, and in the central United States, if at once recognized and properly treated never ends in death; that it is speedily curable, never continues, provided the nature of the disease be recognized and appropriate treatment employed.

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*Read before the North Carolina Medical Society June 8, 1897.

When we speak of continued fevers, especially in North Carolina, we mean either typhoid fever, continued malarial fever, or a simple continued fever.

I feel that it is my duty, and it is one of the objects of this paper, to contribute my efforts to influence the disuse, or, as much as possible, toobsolete the "term continued malarial fever." Its prevalence conflicts with established facts in therapeutics; it means that quinine is not a specific in malaria; that the malarial parasite lives and multiplies within the body, regardless of the amount of quinine ingested; that our repeated demonstration of its specific action in malaria has been a dream, and that we erase, from our already small list of specific remedies, the most prominent.

There are no longer differences of opinion as to the causes of these respective fevers, especially of the two former. The physical properties, the prominent characteristics, and the general behavior of the typhoid bacillus, are perfectly familiar to the pathologist and bacteriologist. The same can be said of the plasmodium malariæ, and the pigmented bodies described by Laveran. All medical men agree that these pathogenic organisms are responsible for these fevers.

The cause of the third condition of pyrexia is not so clearly understood. Many abnormal conditions of the system, however, may participate in the cause or production of a simple continued fever. A high temperature does not necessarily mean that there are specific germs in the body which are acting upon the thermic nerve center, for it is known that several abnormal conditions of this center produce high temperature when pathogenic germs are absent. So far as I know, the function of every organ in the body depends upon two opposing nerve forces, the accelerator and the inhibitory. Any condition that causes confusion, discord, or a deviation from the normal mechanism of these two forces, is likely to produce a high fever, either by an overproduction of heat, or its imperfect dissipation. In this way it is explained why it is that patients suffering with any febrile condition develop rapidly a very high temperature, when their nervous system is exercised to any great extent, either by fear, joy, anxiety, or responsibility.

This increase of fever is not due to the presence of a micro-organism in the body, but either to an overproduction of heat due to an excited thermic center, or an inability on the part of the inhibitory nerves to regulate the dissipation of heat in proportion to its production. While fever can be produced and continued in this way, and its etiology not in any way dependent upon pathogenic germs, yet, by far the most common cause is the action of some form of bacteria upon the thermic center, and the usual birth-place and channel in which these bacteria find their way into the circulation is the digestive tract. Whenever from a mental, physical or diseased cause the normal process of digestion is impaired, we have in the stomach a defective acid secretion, an increased bacterial fermentation and possibly a production of chemical poisons. If absorbed, which is often the case, our patient suffers with chilly sensations, a tired feeling, headache, a feeling of heaviness and fullness of the stomach. A patient in this condition soon develops fever, due to the action of these poisonous substances on the nervous system, and if he continues to eat, exercise both mentally and physically and does not make an effort to aid nature to eliminate the poison, he is likely to develop a continued fever that resembles typhoid, especially the range of temperature, and I believe that we often call it continued malarial fever that continues after complete cinchonism is produced. Perfect rest, in every sense of the word, and a vigorous eliminative treatment will, in a week's time cure a large majority of this kind of continued fever. It has been suggested, and I believe it is correct, that it is this fever that the Woodbridge treatment so effectually aborts, and not typhoid.

At the last meeting of the Pan-American Medical Congress so many papers were presented touching upon some form of malarial fever; its cause, prevention, duration and treatment, with so many differences of opinion in reference to all its characteristics; so many inconsistent theories regarding the cause of the continued types, that it was evident that we have lost sight or confidence in quinine as an abortive and curative agent in this disease, and that its diagnostic value in continued fevers has not received the attention it deserves. This conclusion is not alone based upon the papers read before that Congress, but from a careful examination of the large amount of literature that has been published during the past several years touching upon this subject. Almost the entire medical profession for a hundred years believed that quinine was a specific in malarial infections. They did not consider its diagnostic value in continued fevers, for they also believed that it would, in a certain per cent of cases, abort typhoid fever. Since we have almost unamimously united in the belief that it does not effect or influence the typhoid bacillus, or any of the pathological processes accompanying the fever for which this germ is responsible, it seems to me that it has a diagnostic value that has not been fully appreciated.

Loomis' and Thompson's new system of medicine, the first volume of which was published a month or so ago, says: "When it is impossible to obtain the aid of the microscope in the diagnosis of malarial fever, it may be definitely made by the therapeutic, test for no malarial fever now known resists good doses of quinine for more than 3 or 4 days. That it is generally safe to say that if the process be malarial the temperature will be practically normal by the fourth day." Further it says if quinine fails to influence the fever we may rest assured that the process is non-malarial. The therapeutic test here referred to is very important, and should be constantly kept in mind, especially if we do not resort to the aid of the microscope when we are making our diagnosis in continued fevers.

I have advocated the importance of this therapeutic test for ten years, and even now, when the microscope can so easily be resorted to, and our diagnosis made without any question of doubt, still the test is indispensable, for many of us have not the instrument necessary, or have not been specially trained in microscopy to fully realize all of its advantages.

My position, as I have already indicated, is that whenever quinine is properly administered, and a sufficient quantity absorbed, it will destroy the malarial parasite in all its forms and condition.

We have abundant proof to substantiate this statement.

In a private letter, bearing upon this subject, Dr. Robert Bartholow says: I have made numerous experimental investigations of the kind you mention in your letter, and it is clear in my mind that quinine has the power to inhibit or destroy the malarial organism in all of its forms, and as a result of its administration this parasite and its various modifications are acted on in close approximation to the amount of the drug given.

Dr. Tyson, of Philadelphia, says: "In reply to your letter, I am confident that quinine is directly destructive to the organism which is now held responsible for malaria, and that the drug is equally effective in all its manifestations."

Dr. H. C. Wood says: "I would expect malarial parasites to be killed by quinine if the blood contained a sufficient amount of the drug. One to twenty thousand, I believe, is the saturation required."

Dr. DaCosta says: "I know, however, that small doses of quinine may not eradicate the malarial organism, while large doses certainly will."

I could continue to quote, if necessary, as many as thirty more communications that I have received from men eminent in the profession, from all over the English speaking world, who believe, without a single exception, that there is no condition of the malarial parasite, no stage of its development, or any of its forms, that can resist the action of the cinchona alkaloids.

I have, myself, made a great many microscopical examinations of the blood of malarial subjects, studying especially the behavior of the crescentic, amœboid and ring shaped bodies, which Laveron contends are the forms of the parasite that are responsible for the continued types of malaria, especially our œstivo-autumnal fevers, and I find that they are but slightly influenced by ordinary doses of quinine, if it is given as it usually is, while the patient has a temperature of over 102 degrees. But if we produce distinct, well-marked intermissions of the fever artificially by giving sufficient doses of antipyrin, antifebrin, or phenacetine, the effects of the quinine on the parasite is entirely different; it is acted on and destroyed as quickly as the spherical bodies that are found in an ordinary attack of intermittent fever.

This peculiar action of quinine on the malarial poison has a tendency to confirm a belief that I have for a long time entertained, that the drug is very imperfectly digested and absorbed when administered in any condition when the temperature is over 102 degrees. The belief, to some extent, prevails that any form of the parasite that inhabits the blood cell is not acted on by quinine. There is no doubt in my mind that these conclusions are not erroneous. Besides my own observations I have been able to collect the opinions of thirty-two authors touching upon this point, and twenty-eight out of the thirty-two believe that the endo-globular or intra-corpuscular forms are not, on this account, the cause of an uncontrolable fever, and that its proximity to the blood cell does not, in any way, protect it from the action of quinine.

It is generally admitted that the experiments which have lead to the belief that one grain of quinine will destroy the malarial germs in two and a halt pounds of blood which have been taken from a patient suffering with malaria, is correct. Further, it has been demonstrated repeatedly, and it is now considered an established fact, that the parasite under consideration leaves the blood of patients, suffering with malaria, in a close approximation to the amount of quinine given. These experiments, demonstrations, and facts, suggest that when our efforts to abort a continued malarial fever are unsuccessful, that we have a complication in our case to deal with, that quinine does not effect, or our patient has failed to assimilate the proper amount of medicine.

I am convinced that the latter is indeed a very common cause of our failures. Whenever we take into consideration the various physical, physiological and pathological oonditions that influence every stage of digestion and assimilation, both in health and disease, we can see how little we can depend upon the therapeutics of a drug when administered by the stomach, and its action, in a great measure, influenced by the liver, the organ, the functions of which are conceded to be the first crippled by malarial poison. These facts should impress upon our minds the importance of not relying upon any one method in the administration of quinine. Probably the most unreliable way to administer the drug is by pill form, in the way they are usually made. They have often been prepared for several years, and are as hard and as indigestible as a rock. The drug is nearly always prescribed in capsules. This method is fairly reliable, but if we have any reason to believe that it is imperfectly absorbed, we should administer it in the form of a solution, either the sulphate or bi-sulphate, first by the stomach, then by the rectum, and it is often necessary to inject the bi-sulphate solution hypodermically. Experimental observations show that when it is administered in this way it only requires one-fifth as much as when given by the stomach.

We have an accurate knowledge of how much quinine is necessary, where it is injected directly into the blood, to destroy the plasmodia of malaria, but we have no way to ascertain, in a particular case, when the usual methods of administration have been adopted, when this necessary quantity has been reached except by the results. Therefore it is necessary for this alone to govern us in determining the size of the dose we recommend.

DISCUSSION.

Dr. Sikes.—I do not wish to say anything to refute Dr. Register's idea of quinine on these cases. I have some doubts about being able to make a diagnosis since malaria has got so common. Up and down the swamps in my country where almost all the people practice medicine upon themselves, I find that an entire reliance upon quinine does not meet the demands of the case. I am glad that Dr. Register is a long way from where I practice, for he would interfere with my business. A great many people treat themselves with quinine, some largely and some not so much. I believe that Dr. Register is correct as to the effect quinine has upon this disease, but there is evidence that if the germ is destroyed, it only takes six or eight days for the trouble to return. I have seen numbers of cases where people treat themselves, and not always themselves but where they have been treated by quinine by those in the profession, that got over the primary attack and were "up and about" as they say, and in from six to ten days, the trouble returns again. I have seen that in localities where you have less malaria it is less easy for it to recur; but I have had some cases under my care that I have kept on quinine all along in combination with other drugs, and still they will recur within thirty days all the whole year through. My notion is, that while quinine may be a potent factor in the treatment of this, unless we use a little arsenic and a little iron to build up the patient, we will have a recurrence of the trouble. That has been my experience.

Dr. Royster.—I may say on the whole that I agree heartily with the ideas expressed in Dr. Register's paper. I believe in quinine as a specific for malaria, I believe in the importance of the examination of the blood in the diagnosis of malaria, I believe in the proper method outlined by Dr. Register for administration. The only point about which I feel disposed to differ, is on the question, whether quinine is a therapeutic test for malaria, and whether we ought to depend wholly upon that as a test. In a paper I read a year ago for the annual discussion before the Society, I expressed the opinion that a great many fevers in which quinine was administered would get well regardless of the administration of that remedy. We all know the influence of quinine in septic fevers. We know that simple continued fevers may get well under quinine, but I take the ground that it is not an absolute therapeutic test for malaria. I want to say that I believe it is unjustifiable and unnecessary to administer quinine unless we are absolutely certain that it is malaria. I mean quinine in antiperiodic doses. I know that a great many practitioners disagree. For instance, if a physician saw a man for the first time and wasn't sure what kind of fever he had, he would immediately begin giving him quinine; if he gets restless and nervous and does not improve, then it is typhoid fever, if the fever goes down, it is malaria. I take it that this is unscientific and unjustifiable. I am sure I would not care for a doctor to give me quinine if I had typhoid fever. I want to call attention to the fact that the only absolutely certain method of diagnosis in malarial fever is the finding of the plasmodium of malaria in the blood of the patient. I want to reiterate that I believe in the specific action of quinine in malarial fever. I believe it cures it. I don't believe in quinine as a therapeutical clinical test. Before I sit down I want to concur heartily in Dr. Register's remarks on the administration of quinine. I am satisfied that in our State and all over the world quinine has been given recklessly and injudiciously in malarial fever. The custom formerly was when the patient had a chill to begin early in the morning and give ten grains of quinine every two hours up to the time of the chill, thinking by that means to "break it up," as it is called. I think this treatment is not only worthless, but absolutely to be condemned. I may be wrong, and some of the older heads may prove that I am. The quinine has not dissolved in the stomach and has not entered the blood in such a short space of time. I do not believe in the method of trying to get a certain amount of quinine into a patient before the time of the chill. The method which I have followed, which is not original with me at all, is one which is coming generally into vogue, and is being used in the Johns Hopkins Hospital altogether. It is to administer to every adult from three to five grains of quinine in solution or in capsules every four hours, regardless of the time of the chill, height of the fever, or anything else, giving acids if necessary to promote the absorption of the quinine. Give to a child from one to three grains with the same interval between the doses.

Dr. Crowell.—I remember Dr. Royster's paper a year ago. I have done no special work on that line since that time, but I am of the opinion that there is no continued fever, unless it is for a day or two, other than typhoid or malarial. If you fail to find the plasmodium of malaria in the blood, and if you will try the serum test for typhoid fever, you will find that there is typhoid fever. I think beyond a doubt that quinine will destroy the plasmodium of malaria. I do not believe there is a continued fever other than typhoid or malarial.

Dr. O'Hagan.—At the risk of making myself troublesome I would like to say a few words in reply to my young friend over there. Before I do so, I wish to say, that I perfectly endorse the views Dr. Register has taken in his paper. I have been dealing with malarial fever for half a century, and being a liberal-minded man, I sometimes use pretty liberal doses, but at no time in my life have I ever attacked my unfortunate patients with ten grains of quinine every two hours. I can generally bring about cinchonism without knocking them senseless every day in the week, as I certainly would do with ten grains of quinine every two hours. I do not know what kind of nerves the people of Wake county have, but I think if they were subjected to that treatment you would have a good many visitors up in your establishment from that county, Dr. Murphy. There is a right way and a wrong way of giving quinine. If you give it right you will get therapeutic results, and you will get better results from it in solution with some acid, generally dilute sulphuric acid. You can make it partially palatable, but where I can have control of my patients, I generally give it just so, at the decline of the fever, fifteen grains. It seems to have a better effect on the plasmodium in small doses, especially in the dry form. It is much more readily absorbed in the stomach when desolved in acid, and consequently requires smaller doses.

I will not enter into a discussion as to the number of fevers which prevail here in this State. I only know that where we live we always have malaria and always will, winter and summer, and we have typhoid fever too. I am not scientific enough to use these instruments, and as to the microscope I am in a state of childish ignorance. I know one when I see it, but as to the use of it I know nothing at all, neither do I understand anything of bacteriology, I am sorry to say. I learn from the younger members because in my day these things were not known. I have stood by bed-sides, and have picked up a little clinical experience, and I still hold that although I would not begin to swear by my diagnosis in malarial or typhoid fever, I arrive at very satisfactory results. I find that quinine properly given will destroy the plasmodium, and when it does not do it, I expect it is typhoid. However, I cannot allow my old friend quinine to be abused in my presence without defending it. There is a right way and a wrong way to give quinine, and if not properly presented to the body, stomach, bowels and liver you will not get good results. I say there is no greater blessing to the people in the world than quinine properly given. I think Dr. Register's paper was a very timely one.

Dr. Duffy.—In this connection perhaps it would be well to refer to the preparation of quinine, which so far as I have seen is only put up by Sharp & Dohme, bimuriate of quinine and urea. I refer to it on account of its remarkable solubility for hypodermic use. That has sometimes served me when nothing else would. I have been called to patients who were comatose and having convulsions from malarial disease, so that I could not administer anything at all by the stomach. Six grains of that—it is put up in three grain tablets—may be dissolved in twenty minims of water. I have used it hypodermically without any abscess. I had the misfortune to get one last year, the first I ever got. Before that I thought it was well nigh proof. It seems to me rather optimistic to expect the eradication of malarial germs by a few doses of quinine. I think this year I had at least three cases of malarial neuralgia with pain over one brow coming on at a certain hour of the day, the most violent neuralgic pain, which I could attribute to nothing but malaria. The periodicity would seem to indicate it, and in these cases I have given quinine regularly, and the pain would come on regularly, no fever, but periodical neuralgia. I have known Warburg's tincture to stop it after quinine had failed to serve me.

Question asked. "Have you ever given soda"?

Not in neuralgic cases that I remember. In a case where the pain came on periodically at a certain hour, in a place where malaria is common and where malarial fevers are, it is very suggestive of that, especially where Warburg's tincture cured it.

Dr. Royster.—I want to insist that Dr. Duffy has no absolute assurance that that was malaria, as there are many drugs in Warburg's tincture and among them arsenic. Any body could take exception and say that it was not. I want to ask Dr. O'Hagan the right and wrong way of giving quinine. I would like to know the method of administering it.

Dr. O'Hagan.—I do not profess to say that mine is by far the best and correct way of giving quinine, but it simply suits me. I want to say something about periodic neuralgia. All periodic diseases have a certain cycle to run and are controllable to a greater or less degree by quinine. I have known them time and time again to be modified when the paroxysm comes on, by a dose of quinine, 20 grains. Periodic neuralgia, or sun pain, as it is called, because it usually begins with the rise of the sun, is helped that way, and in periodic neuralgia you will get good results from the use of quinine. Now, Dr. Roysrer, I cannot confine myself to any one method of giving quinine. If I had a good substantial stomach to deal with, I would give it to him in solution. Sulphuric acid might add something, and would make it less bitter. If it was a baby, I would put the quinine in some kind of syrup, for with children you have to make the dose as palatable as possible, and it is a hard thing to make palatable. It is almost impossible to administer it hypodermically to children and infants. Even a puncture of the needle, unless it is very aseptic, may cause inflammation but it can be given epidermically. Take the epidermis off by a blister and put the quinine there and it will be absorbed readily. I have no confidence in the administration by inunction. I have no fixed method of giving quinine; I give it according to the case. Some stomachs are exceedingly sensitive, and others take it readily.

Dr. Burroughs.—I would like to say something about Dr. Duffy's idea in regard to periodical pains, speaking of it as accompanying malaria. I came from a section of the country where we do not have malarial fever. I have never seen a case of it in the mountains. We have had some cases coming up from South Carolina and from the eastern part of this State, yet among the mountains I have seen this supra orbital pain that he speaks of. It comes on at a certain time each day, and in regard to the treatment, I will say that quinine has no influence on it. A small dose of morphine given hypodermically will relieve it, but it will come back again after a time. I find nothing to serve me so well as a hypodermic injection of nitrate of strychnine. You may rely on it as almost specific in cases of this kind. Nitrate of strychnine given twice a day in doses of $\frac{1}{16}$ of a grain hypodermically and increased gradually to twice that much, will gradually ease the pain and it will disappear in a little while. Keep up the treatment for a week or ten days after, and you will have it no more.

Dr. Flippin.—In connection with the supra orbital pains, I will say that I was raised in a section of country where we do not have any malaria, and I never saw a case except in the eastern part of the state. I have gotten a good deal of good results from the use of salicylate of soda in this periodical supra orbital pain. I give big doses of it, from 2c to 30 grains, and it has always broken it up for me. I have never gotten much results from the use of quinine.

Dr. Robinson.—I did not have the pleasure of hearing the paper, as I came in late. It seems to me that the ground has been pretty well covered, and certainly we have a variety of remedies sufficient to cure almost any disease of supra orbital neuralgia. I hardly know how to discuss the paper, as I didn't hear it. It impresses me both theoretically and practically that quinine ought to break up these fevers, and as Dr. O'Hagan says, properly administered, it does. I think we very often overlook the fact that we have other factors at play which interfere with the proper administration of and so with the effects of the quinine. Often we have a condition of the alimentary canal which materially interfers with the effects.

THE NEWER PREPARATIONS OF BISMUTH.—(Reynold W. Wilcox, *Medical News.*)—The author presented a paper on this subject three years ago and has but little to add to and nothing to retract from his statements made at that time. Of the three preparations then studied he has found bismuth naphtolate the most useful. This preparation is decidedly antiseptic. It is partly decomposed in the stomach but the process is completed in the small intestine. A small part of the naphtol is eliminated by the kidney, but the larger portion passes entirely by the bowel. It was found markedly beneficial in several cases of gastric and enteric fermentation, and in one severe case of intestinal putrefaction. Cases of typhoid fever coming under treatment within the first week have lacked the classic symptoms, and presented low temperatures. He draws the following conclusions:

1. That the use of the organic in place of the inorganic bismuth compounds should be insisted upon.

2. That the compounds of bismuth with betanaphtol, phenol, tribromophenol, and tetra-iodo-phenol-phtalein are remedies which produce practical intestinal antisepsis.

3. That they are indicated in all gastro-intestinal fermentations and catarrhs until the symptoms are relieved, the dose to be determined by the severity of the symptoms.

4. That they are non-toxic and do not give rise to untoward symptoms.

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

A VACCINATION RELIC.

Dr. W. S. Everett (*Boston Med. and Surg. Jour.*) exhibited before the Dorchester Medical Club recently an interesting relic of the early experiences attending the introduction of vaccination in the shape of a certificate bearing the following legend:

> MILTON, 25th October, 1809.
>
> The twelve children whose names are written on the back of this card were vaccinated by Dr. Amos Holbrook at the town inoculation in July last; they were tested by small-pox inoculation on the 10th instant, and discharged this day from the Hospital, after offering to the world in the presence of most respectable witnesses who honored Milton with their attendance on that occasion an additional proof of the never-failing power of that mild preventive, the Cow Pock, against small-pox infection, a blessing great as it is singular in its kind, whereby the hearts of men ought to be elevated in praise to the Almighty Giver.

The signatures to this certificate are Rufus Pierce, Jason Houghton, Jno. Mark Gourgas, Jedidiah Atherton.

The incident connected with this certificate was as follows: At a town meeting of the citizens of Milton, (Mass.) July 8, 1809, a committee was chosen to take into consideration any measures for inoculating with kine pock, such individuals as had never had small-pox. On August 26, 1809, this committee, reported that they had procured certificates from respectable physicians which were calculated to remove all doubt that the kine pock is a perfect preventive of small-pox, and they had inoculated 337 persons. The committee feeling that their trust would not be faithfully performed until they had made some decisive test, set about to find some who after having been inoculated with the kine pock would submit to an inoculation with small-pox. They succeeded in finding twelve children whose parents consented to having them inoculated. A house was provided for their treatment and, on the 10th of October they were inoculated, in the presence of "respectable witnesses," with small-pox virus obtained from Dr. Welch, of Boston, who testified to having furnished pure small-pox material for the vaccination. The children were kept under surveillance until the 25th when there had not been a single instance where there had been any indication of the disease, and were then discharged. The names of the children written on the back of the certificates, and each of whom received a copy of the certificate were Joshua Briggs, Thomas Street Briggs, Martin Briggs, Catharine Bent, Ruth C. Horton, Samuel Alden, Benj. Church Briggs, George Briggs, John Smith, Susanna Bent, Mary Ann Belcher. When we remember that the public mind of that time was not as thoroughly satisfied in regard to the immunity furnished by vaccination, we cannot fail to wonder that parents could be found who were willing to submit their children to the test. What would our latter day anti-vivisectionists say? Our wonder may be somewhat modified by noticing that of the twelve children, six bore the name of Briggs, and probably Massachusetts did not, at that time, have a law pensioning the parents of large families. Be that as it may, the test was made and the immunizing power of vaccination proven.

Reviews and Book Notices.

Hypnotism.—And its application to pratical medicine. By Otto George Wetterstand, M. D,, member of the Society of Sweedish Physicians at Stockholm, etc., etc. Authorized translation (from the German edition) by Henrick G. Petersen, M. D., together with medical letters on Hypno-Suggestion, etc., by Henriok G. Petersen, M. D. Cloth, royaloctavo,one hundred and sixty-six pages. Price $2.00. G, P. Putman's Sons, New York, 1897.

The true physician seeking to possess himself of all such knowledge as will the better enable him to cope with disease and mitigate the sufferings of his fellow men, will not fail to read this volume because it deals with methods against which he may be prejudiced. The physician should be broad minded enough to approach any theory, trusting to his own intelligence to keep him from those methods which are illigitimate. That there is a place for the practice of suggestive therapeutics cannot be denied by those who believe in the existence of hysteria. As suggestion may lead to suffering, it may, in the same way, relieve from suffering.

Dr. Wetterstand has given here his experience in this method of treatment in insomnia, neuralgia, chorea, hysteria, and various other conditions. One will naturally hesitate to accept the assertion that hypnotic suggestion will stop the hemorrhage from a cancerous uterus, or restore the usefulness of paralyzed limbs, but in those cases of functional nervous derangement, where the remedies of the pharmacopœia have been tried in vain, there is reason to believe that relief may be obtained through the influence of suggestion. Numerous cases are cited in which the method is claimed to have effected a cure.

Transactions.—Of the New York State Medical Association, year 1896. Vol.XIII. Edited for tke Association: 64 Madison Avenue, New York.

This volume of over six hundred pages contains the excellent papers read at the last meeting of the Association. Conspicuous among these is a contribution by Dr. E. H. Squibb on the materia medica, pharmacy and therapeutics of the year ending ctober 1, 1896. He says "it is agreeable to report that in a general way the craze for novelties has somewhat subsided during the past year, although there are abundant evidences that the mill is still grinding, especially in that ever fertile source of supply—Germany." In support of this assertion he presents a paper covering 145 pages of the transactions, in which he gives brief notes of the more interesting preparations brought out during the year.

Correspondence.

STUDY OF THE AMERICAN MEDICINAL FLORA.

The Sub-Commision of the Pan-American Medical Congress appointed to study the medicinal plants of the United States has entered into an association with the Smithsonian Institution for that purpose. The attention of our readers is called to the respective circulars issued by these organizations, which we print below.

SMITHSONIAN INSTITUTION, Washington, D. C.,
May 28, 1897.

DEAR SIR:—The Smithsonian Institution has undertaken to bring together all possible material bearing on the medicinal uses of plants in the United States. Arrangements have been made with a body representing the Pan-American Medical Congress, the Sub-Commision on Medicinal Flora of the United States, to elaborate a report on this subject, and the material when received will be turned over to them for investigation.

The accompanying detailed instructions relative to specimens and notes have been prepared by the Sub Commission.

All packages and correspondence should be addressed to the SMITHSONIAN INSTITUTION, Washington, D. C., and marked on the outside *Medicinal Plants for the U. S. National Museum.*

Franks which will carry specimens, when of suitable size, together with description and notes, free of postage, through the mails, will be forwarded upon application. Should an object be too large for transmission by mail the sender is requested, before shipping it, to notify the Institution, in order that a proper authorization for its shipment may be made out.

(Signed) Respectfully,
S. P. LANGLEY, SECRETARY.

INSTRUCTIONS RELATIVE TO MEDICINAL PLANTS.

The principal points of study are as follows:

1. Local names.
2. Local uses, together with historical facts.
3. Geographical distribution and degree of abundance in the wild state.
4. Is the plant collected for market, and if so,
    (a) At what season of the year?
    (b) To how great an extent?
    (c) How prepared for market?
    (d) What is the effect of such collection upon the wild supply?
    (e) What price does it bring?
    (f) Is the industry profitable?
5. Is the plant, or has it ever been, cultivated and if so give all information on the subject, particularly as to whether such supplies are of superior quality, and whether the industry has proved profitable.
6. If not cultivated, present facts concerning the life history of the plant which might aid in determining methods of cultivation.
7. Is the drug subjected to substitution or adulteration, and if so, give information as to the plants used for this purpose.

While it is not expected that many persons will be able to contribute information on all these points concerning any plant, it is hoped that a large number of persons will be willing to communicate such partial knowledge as they possess.

It is not the important or standard drugs alone concerning which information is sought. The Sub-Commission desires to compile a complete list of the plants which have been used medicinally, however trivial such use may be. It also desires to collect all obtainable information, historical, scientific, and economic, concerning our native and naturalized plants of this class, and, so to that end, invites the co-operation of all persons interested. Poisonous plants of all kinds come within the scope of our inquiry, whether producing dangerous symptoms in man, or simply skin inflammation, or, as "loco-weeds," deleterious to horses, cattle and sheep. In this respect, the general reputation of a plant is not so much desired as the particulars of cases of poisoning actually seen, or heard from reliable observers.

In order to assist in the study of the habits, properties and uses of medicinal plants, the Sub-Commission undertakes to furnish the name of any plant-specimen received, together with any desired information available.

Owing to the diversity in the common names of many plants it will be necessary for reports, when not furnished by botanists or others qualified to state the botanical names with certainty, to accompany the same with some specimen of the plant sufficient for its identification. While the Sub-Commission will endeavor to determine the plant from any portion of it which may be sent, it should be appreciated that the labor of identification is very greatly decreased, and its usefulness increased, by the possession of complete material, that is, leaf, flower and fruit, and in the case of small plamts, the underground portion also. It is best to dry such specimen thoroughly, in a flat condition under pressure, before mailing. While any convenient means for accomplishing this result may be employed, the following procedure is recommended: Select a flowering or fruiting branch, as the case may be, which when pressed shall not exceed 16 inches in length by 10 inches in width. If the plant be a herb 2 or 3 feet high, it may be doubled to bring it within these measurements. If it possess root leaves, some of these should be included. Lay the specimen flat in a fold of newspaper and place this in a pile of newspapers, carpet felting, or some other form of paper which readily absorbs moisture, and place the pile in a dry place under a pressure of about 20 to 30 pounds, sufficient to keep the leaves from wrinkling as they dry. If a number of specimens are pressed at the same time, each is to be separated from the others by 3 or 4 folded newspapers or an equivalent in other kinds of paper. In 12 to 24 hours these papers will be found to be saturated with the absorbed moisture and the fold containing the specimen should be transferred to dry ones. This change should be repeated from 2 to 5 days according to the state of the weather, the place where the drying is done, the fleshiness of the specimens, etc. The best way to secure the required pressure is by means of a pair of strong straps, though weights will do. The best place for drying is beside a hot kitchen range. When dry the specimens should be mailed between cardboards or some other light but stiff materials which will not bend in transit.

It is a most important matter that the name and address of the sender should be attached to the package and that the specimens, if more than one, should be numbered, the sender retaining also specimens bearing the same number, to facilitate any correspondence which may follow. The Sub-Commission requests that, so far as practicable, all plants sent be represented by at least four specimens.

(Signed) H. H. RUSBY, M. D.,
Chairman of the General Commission,
New York College of Pharmacy.

VALERY HARVARD, M. D.,
Chairman of the Sub-Commision.
Fort Slocum, Davids Island, New York.

Abstracts.

Antitubercle Serum.—In a paper read before the American Medical Association, in Philadelphia, Dr. Paul Paquin, presented a report of 67 cases of consumption treated by this method with the following results:

Total number of cases 97.

Effect on fever: 17 subsided, 22 reduced, 5 increased, 23 not recorded.

Effect on night sweats: 26 subsided, 4 unchanged, 27 diminished, 10 not recorded.

Effect on weight: 40 increased, 11 unchanged, 4 decreased 12 not recorded.

Effect on strength: 34 increased, 10 unchanged, 4 decreased, 19 not recorded.

Effect on appetite: 34 increased, 10 unchanged, 4 decreased, 19 not recorded.

Effect on local signs: 17 disappeared, 22 mitigated, 27 not recorded.

Effect on tubercle bacilli, 17 disappeared, 35 reduced, 15 not recorded.

In concluding his report, he said that too much is expected of sero-therapy in tuberculosis, or of any treatment for that matter. It can never be possible to arrest consumption when the tissues are so destroyed and their generated energies so enfeebled that they are beyond stimulation. It is only in the early stages that one may expect the best results (and in the early stages it is a most efficacious remedy). One great trouble we have to deal with is mixed infection and can be reached only by the use of antitoxins prepared especially for the germs producing the complications, assisted occasionally by other measures. Tubercle antitoxin can not act directly against microbic complications. Furthermore it should not be forgotten that the destructive process of tuberculosis is so great, so comprehensive, that no means of wise special or general treatment should be spared to assist sero-therapy or any other special treatment in the work of repair.

COMMON ABORTION AND TUBAL PREGNANCY.—Skutsch (*Centralbl. f. Gynäk.*) lends his authority to support, by a case under his own observation, the theory that in tubal abortion the ovum is not invariably expelled from the ostium of the tube, but may be discharged into the uterus. In his case a complete decidua was discharged; its walls measured 4 millimetres in thickness. Afterwards the ovum was expelled; it bore a minute aperture at its lower pole. Skutsch insists that there had been tubo-uterine or interstitial pregnancy, and that the ovum had been delivered into the uterus. This diagnosis was supported by the detection of a thickening of the right cornu. Tubal gestation is undoubtedly very common, and Skutsch goes so far as to say that though tubo-abdominal abortion is the more frequent complication, next to rupture, tubo-uterine abortion is not rare. —*British Mëdical Journal.*

A NEW INCISION IN THE CÆSAREAN OPERATION.—Heinrich Fritsch (*Central. f. Gyn.*)says that'while doingan autopsy upon a woman who died late in pregnancy, the uterus having been opened by a transverse incision above the fundus in order to obtain a view of the internal os uteri, he was impressed by the ease with which the fœtus could be extracted, and by the smallness of the incision, and the freedom of the oviducts from injury, and determined to adopt the method upon the next opportunity. An opportunity soon occurred for conservative Cæsarean operation in a married woman, and proved that this incision obtained great advantages. The abdominal incision can be made higher up in the abdomen so that the umbilicus can occupy its center. This lessens the danger of subsequent hernia, and affords a better opportunity for the assaitant to compress the uterus, as it is undisturbed in position; the blood did not reach the abdominal cavity, but flowed outward. The cleanliness of the operation was surprising. Though the placenta was touched by the incision the hæmorrhage was very slight, as soon as the large placental sinuses had been emptied the bleeding stopped without compression of the cervix. After detaching the placenta the legs of the fœtus were in reach, and the child removed with ease. The most striking feature was the rapid contraction of the wound by the contraction of the fundus.

The incision, about eight centimeters in length, requires but seven sutures applied closely. The hæmorrhage ceased at once on their introduction. This transverse incision at the fundus is parallel to the vessels. Therefore, the sutures will litigate the vessels, while in a longitudinal incision the sutures are parallel with the vessels; this accounts for the easy control of bleeding by the suture in the method above described. The operation lasted twenty-one minutes in all.—*Amer. Gynecol. and Obstet. Jour.*

HOT-AIR BATHS IN ALBUMINURIA.—*Bul. gèn de Thèrap.* summarizes the article of Carrière, of Montpellier, in *Cong de Nancy*, August 1896, in which he recommends hot-air baths, because they fulfill two leading indicatious: the profuse sweating relieves the kidney; it gives regularity to organic exchanges.

The method is simple: A hospital bed is provided with a cradle to hold up the covers. Under this is placed an alcoholic lamp with chimney leading out from under the bed. The air here around the patient, who has only his head outside the covers, is raised to 104°F. and kept so for twenty minutes. This is repeated every four days.

The immediate physiological effects are, an agreeable sense of warmth, a profuse perspiration accompanied by acceleration of pulse (20 beats or more) and a rise of temperature 1° or 2°. No ill effects except fullness in the head and palpitation in the first trials are observable. The effects on temperature, perspiration, and pulse keep up an hour after the bath. The quantity of urine diminishes the day of the bath. The next day slight increase may be as much as 4000 c. c., the kidneys apparently working better on account of the previous day's rest. The albumin is much lessened the second day, it increases later, but does not become as much as at first, and gradually lessens and disappears.

They are indicated in subacute and chronic epithelial nephritis. They are not suitable in cases with vascular congestion, with arterio-sclerosis, with much nervous disturbance, or with skin-lesions.—*Amer. Medico-Surgical Bulletin.*

IODIDE OF POTASSIUM AND LACTATION.—G. Fieux (*Rèv. Obstét. Internat.*) has tested the effect of iodide of potassium on nursing women. He finds from six observations that the coming of the milk after labour is not delayed, that the course of the lactation is not interfered with, and that the infant does not suffer, as is shown by the increase in weight during the administration of the iodide. There is no reason, therefore, to fear that the administration of iodide of potassium to a syphilitic mother will interfere in any way with her functions as the nurse of her own child. The fears that it will do so are imaginary.

SUBMAMMARY INFUSION OF SALT SOLUTION FOR PUERPERAL HEMORRHAGE.—Dr. J. G. Clark, of the Johns Hopkins Hospital, (*American Journal of Obstetrics*) recommends the use of submammary saline infusions, where exhausting hemorrhage has taken place from abortion or full-term labor, as originally suggested by Edebohls. Graduated glass jars of 1,000 cubic centimeters capacity are used as reservoirs for the solution, which is made of the strength of 6:1000 of common salt in warm sterilized water. The jar is connected by five feet of rubber tubing to a long, slender needle, similar to an aspirating needle. Before giving the infusion the breast is carefully disinfected, especially at its dependent portion. It is then grasped with one hand and lifted well up from the thorax, while the needle, with the fluid flowing from it, is quickly thrust beneath the gland. If the fluid does not flow by its own pressure, it can be forced in by stripping the tube from the reservoir downward, driving the column of fluid ahead into the tissues. At least a quart of solution should be injected altogether, part under each breast. No bad results are possible, if strict cleanliness is observed, and the blood loss from hemorrhage is at once made up by the normal salt solution absorbed.—*Occidental Med. Times.*

INJURY AND CANCER.—Berger (reprint from the *Nierteljahrsschrift f. gerichtl. Med. v. offentl. Sanitätswesen*) considers very fully the connection of malignant disease with injury. His researches have led him to the conclusion that injury is a predisposing factor in the development of cancer, influencing the external manifestation and locality of the disease. The objections to the traumatic origin of cancer—such as, for instance, the rare occurrence of cancer immediately after injury—the negative results of experiments, and the slight value of the patient's report, do not, it is stated, hold good. The form of traumatism predisposing to cancer is not, the author holds, so much a single severe injury as a succession of contusions which give rise to effusions of blood and impair local nutrition. Prolonged or repeated irritation is more prone to lead to cancer when acting on tissues in a condition of senile involution. In considering the relations of malignant disease and traumatism one must bear in mind, not only the purely causative part taken by the injury, but also the influence of injury in promoting the development of cancer. In cases of cancer following injury an etiological relation certainly exists, the degree of which will vary in different instances. The connection between cancer and injury is not an immediate one, but consists rather of an unbroken series of morbid phenomena, each of which is dependent on its predecessor.—*Brit. Med. Jour.*

THE OPERATIVE TREATMENT OF CANCER OF THE BREAST.—This is the subject of the Ingleby lectures delivered by F. M. Burnett May, of Birmingham, England. (*Brit. Med. Jour.*) The results of operations performed twenty years ago are compared with those of to-day.

Statistics published about 1878-1880 showed 50 per cent. of the cases operated upon recurred in three months, 85 per cent. in twelve months, and 90 per cent. of all cases were dead in two years. These statistics justified the then prevalent view that cancer was incurable. The operation almost exclusively performed at this time was simple excision of the tumor with a part of the breast, the axilla being never opened.

Mr. Moore, of Middlesex Hospital, is said to have first advocated excision of the entire breast, skin, fat, lymphatic glands, and more or less of the pectoral muscle, as early as 1867, but apparently no one operated upon these lines until Volkmann and Kuster, 1875-1880, urged systematic cleaning out of the axilla in all cases, whether the glands could be felt or not. This method was soon universally adopted in Germany, but gained favor slowly in England. Gross advocated it in America, and did much to popularize it.

The mortality of these early operations was high, due chiefly to sepsis.

As to the modern methods and results, the writer states that he has had no mortality in seventy-six cases.

He does not believe in primary skin-grafting, better results being obtained if the grafting is postponed from eight to ten days later. As to the limitations of operative procedures he lays down some excellent rules.

"It is useless to operate in cases of wide skin-infiltration or scattered tubercles, as the most extensive sacrifice of skin cannot cure these." In some cases he believes it best to explore the posterior triangle of the neck and remove the glands, but not as a routine procedure.

Adopting Volkmann's three-year limit as the standard of cure, the combined statistics of Rotter, Helferich and Watson Cheyne show 42.17 per cent. of cures in sixty-six cases observed more than three years. These results show a steady improvement since those of Bellsoth in 1876, which had only 4.7 per cent. of cures.

May's own cases, ruling out the cases not traced, number forty-four. Twenty have passed the three-year limit; of these, seven are alive and well, two are alive with recurrence, and eleven died of the disease, giving 35 per cent. of cures. May very justly points out the fact that the three-year limit that has come to be universally adopted as determining a cure is by no means correct. He states that he has himself seen a recurrence eleven years after operation, and not infrequently the patient dies five or six years after operation. In discussing the methods of operation considerable attention is given to Halsted's. May believes the operation should be observed for "advanced cases where the muscles are infiltrated and the infrascapular and cervical glands enlarged, if indeed it is thought advisable to touch such cases at all."

He sees no reason for the fine distinction Halsted makes between "local" and "regionary" recurrence.

As to the widely diverse views regarding treatment of supra-clavicular glands, May believes that if glands can be plainly felt above the clavicle there is no hope of cure, and the case is hardly suitable for operation.

It is a matter of grave doubt whether the more extensive operation gives sufficient additional security against recurrence to make up for the increased risk. It should be remembered that the majority of fatal cases die of *internal* metastasis, against which no operation can protect the patient.

May would regard as non-operable:

1. Large medullary cancers;
2. Scattered tubercles in the skin and edema;
3. Internal metastasis of all kinds;
4. Edema and solid enlargement of the upper limb.—*Amer. Medico-Surgical Bulletin.*

PUERPERAL ECLAMPSIA.—Dr. S. Rumble (*Medical Age*) reports six cases of puerperal convulsions occurring in his practice. Of these one occurred at the eighth month of pregnancy, two about full term and three post-partum. In the first case the convulsions were not controlled by veratrum viride hypodermatically and chloral hydrate per rectum, one dram of the former and two drams of the latter having been given; but were at once controlled by morphia gr. ss and atropine sulphate gr. $\frac{1}{100}$ hypodermatically. In second case, 150 grains of chloral and withdrawing 20 ounces of blood failed to check the convulsions until morphine alone controlled the convulsion. In the remaining three cases morphine and chloroform inhalations were used successfully. The following deductions are derived from these cases:

That puerperal eclampsia is a disease the ætiology of which is yet *sub judice;* that it often develops after the uterus is emptied of the product of conception; that morphine is the most positive and prompt remedy which can be employed to arrest the eclamptic seizure,—in that it obtunds nervous sensibility and arrests muscular spasm, counteracts irritation of the nerve centers whether due to a toxæmia or of a reflex character; that veratrum is an unreliable remedy, and one fraught with danger; that chloroform and chloral hydrate are excellent adjuvants to morphine in arresting the spasms and maintaining the equilibrium of the nervous centers; that cerebral congestion is a result and not the cause of the convulsion,—hence I do not favo venesection; that a deal can be done in lessening the frequency if not the ratio of mortality in the disease, by timely and proper prophylactic treatment.

THE EFFECT OF THE ROENTGEN RAYS ON THE TUBERCLE BACILLUS AND DIPHTHERIA TOXIN.—The question whether the Rœntgen rays exert any influence on bacterial life is of considerable interest, and conclusive evidence on at least a part of the subject seems to have been arrived at by Dr. J. Brunton Blaikie, President of the Edinburgh Royal Medical Society. His experiments, published in the current number of the Scottish Medical and Surgical Journal, were as follows. Portions of glycerine agar having been placed in small boxes of aluminium, which is more transparent to the rays than glass is, they were sterilized and inoculated with streak cultures of the tubercle bacillus. At the same time four healthy guinea-pigs were inoculated with twice the minimum lethal dose of diphtheria toxin, and the remainder of the toxin was placed in another aluminium box.

Three of the boxes containing tubercle culture, two of the guinea-pigs and the box with the toxin, were placed under the full influence of the rays generated by a four-inch spark coil and a good focus Crookes's tube. It was necessary to stop the current occasionally, as otherwise there would have been danger of injuring the tube, and on this account although the subjects of experiment were placed immediately under the Crookes's tube for a working day of about thirteen hours, they received only eight hours of actual exposure to the rays. Next morning two more guinea-pigs were inoculated with the toxin which had been subjected to the rays. The following was the result of the action of the rays on these guinea-pigs: two that were exposed to the rays after inoculation with twice a lethal dose of toxin lived respectively for one hundred and one and fifty-five hours after inoculation. Two that were inoculated with twice a lethal dose of toxin, but not exposed to the rays, lived respectively for one hundred and twenty and seventy-six hours after inoculation Two that were inoculated with five times a lethal dose of toxin which had been subjected to the rays lived respectively forty-five and sixty hours. From the above results it is seen that the guinea-pigs subjected to the rays lived actually a shorter time than the others, and that the toxin through which the rays passed did not lose its lethal properties. All the guinea-pigs showed the ordinary signs of death from diptheria toxin, the only difference among them being that the hair of those through which the rays had passed could be pulled out with unusual ease. The cultivation of tubercle bacillus all grew in the ordinary manner, so that they were evidently not affected by the rays.—*Lancet.*—*Amer. Practitioner and News.*

THE TREATMENT OF ABDOMINAL WOUNDS.—La Torre(*La Gynecologie*, April, 1897), in a very extensive paper upon this subject, aided by experimentation upon twenty-five dogs, determines that hernia after celiotomy is chiefly due to the defective union of the musculoaponeurotic layer or relaxation of the cicatrix, conditions which lead to the union of this layer by second intention, circumstances which relax, tear, and predispose to relaxation of the cicatrix. A good closure of the abdomen results from three principal factor,—the tissues divided and sutured, the suture material, and the method of applying it. The suturing of the aponeurotic tissue of the linea alba is often the cause of hernia, which does not occur, the incision is through the muscle. The incision should be made through the linea alba, and before closing it the aponeurotic tissue should be removed as far as the muscular substance of the recti, and the sheaths and muscles sutured. In old or sterile women the layer suture of the linea alba may be employed if the conditions necessary for a good cicatrization can be gained during and after operation, but as that is almost impossible the incision may be made through the rectus muscle. He removes the linea alba in all cases before closing the abdomen. In cases of secondary closure the incision and suture should always be in materials. The layer suture is best, uniting separately the peritoneum ; if possible the posterior layer of the sheath of the rectus muscle, the rectus muscles, the anterior layer of the rectus muscle sheath, the skin, and subcutaneous tissue. Every effort should be made to gain the primary union.—*University Medical Magazine.*

Therapeutic Hints.

Antigalactogogue.—Camphor in doses of six grains three times a day is recommended where it is desired to dry up the milk of women who for any reason do not nurse their children.

The following formula for the administration of Diuretin is recommended:

℞—Diuretin	4–6 parts
Aq. menth. pip.	100 parts
Aq. destillat.	90 parts
Syr. simp.	10 parts.

M. Sig. Two tablespoonfuls every two or three hours.

A Powder for Vaginal Injections.—The following formula (*Semaine médicale; Rrogrés mèdical*) is attributed to House:

℞—Powdered alum,	each	1 ounce;
Powdered boric acid,		
Powdered borax,		
Hydrastine sulphate		9 grains;
Carbolic acid,	each	20 drops.
Essence of cinnamon,		

M. For each injection, dissolve a teaspoonful of the powder in a pint of water.—*Med. Record.*

Airol Paste in the Treatment of Wounds.—Burns recommends a paste of the following composition for covering sutured wounds:

℞—Airol,	each	10 parts;
Mucilage of gum arabic,		
Glycerin,		
White bole		20 "

M. The paste should be spread on evenly and covered with a thin layer of cotton and a slightly compressive bandage. It dries rapidly, adheres well, works powerfully as an antiseptic, is absolutely unirritating to the skin, and allows the serous secretion of the wound to pass through it. It surely prevents infection of punctured wounds by germs from the skin.—*New York Med. Jour.*

THE PUBLIC SERVICE.

UNITED STATES MARINE HOSPITAL SERVICE.

For the week ended July 31, 1897.

Kinyoun, J. J., passed assistant surgeon, designated as delegate to represent the United States at the International Conference relating to hygiene and sanitary service on shipboard and railways, to be held at Brussels, Belgium, July 29, 1897; also designated as delegate to represent the United States at the International Conference to discuss the leprosy question, to be held at Berlin, Prussia, July 29, 1897.

ARMY.

From July 22, 1897, to August 4, 1897.

The leave of absence granted on Surgeon's certificate of disability to Major William C. Shannon, Surgeon, Jackson Barracks Louisianna, is extended three mouths, on surgeon's certificate of disability.

So much of the order as directs 1st Lieutenent Henry R. Stiles, Assistant Surgeon, to report for duty is amended so as to direct him to report for duty at Fort Premble Maine, relieving Captain Henry S. T. Harris, Assistant Surgeon.

The extension of leave of absence granted Captain Robert R. Ball, Assistant Surgeon, Fort Adams, R. I. is extended until October 15, 1897.

Captain George McCreesy, Asistant Surgeon, is relieved from duty as Attending Surgeon, and examiner of recruits at Boston Mass. and ordered to report for temporary duty at the Soldier's Home, near Washington, D C. for temporary duty, relieving Captain Charles M. Gandy, Asistant Surgeon.

So much of paragraph 16 S. O. 162. A. G. O. July 16 1897, as relates to the officers hereinafter named is amended to read as follows: Captain Frank R. Keefer, Assistant Surgeon, is relieved from duty at Washington Barracks, D. C. to take effect upon expiration of his present leave, and ordered to Fort Walla. Washington, for duty.

Captain William D. Crosby, Assist Surgeon, upon being relieved from duty at Fort Missoula, Montana, is ordered to Fort Sam Houston, Texas, for duty.

1st. Lieutenant Alexander H. Stark, Assistant Surgeon, upon arrival of Captain Crosly, at Fort Sam Houston Texas, is ordered to Washington Barracks, D. C. for duty.

Captain Henry S. T. Harris, Assistant Surgeon, upon being relieved from duty at Fort Premble, Maine. by 1st. Lieutenant Henry R. Stiles. Assistant Surgeon, is ordered to Fort Washakie, Wyo. for duty, relieving Capt. Joseph T. Clarke, Assistant Surgeon.

Miscellaneous Items.

Dr. Francis Smith Nash, who, as surgeon in the United States Navey, has experienced winters in Alaska and other artic regions, says in the *Virginia Medical Semi-Monthly*, that if he were asked to enumerate the things most to be dreaded in the Klondyke he would name them in the following order: want of food, the darkness, solitude, the wind, cold and snow.

Dr. W. C. Ashworth, of Kernersville desires to sell his practice and real estate. Write to him for particulars.

NC Med J (OS) 41:137, #4, 20 Aug 1897

A new annex to the Rex Hospital at Raleigh has just been completed. It comprises an operating room, an anæsthetizing room, a drug room and dispensary and five private rooms. The building is two stories in height and is connected to the main building by glass enclosed piazzas, which will be heated by steam in the winter. The operating room is the finest in the state and probably as well equipped as any in the South. The floor is of white tiling; the wainscotting, five feet high is of the same material; the walls and ceiling are of soap-stone finish, being a pale, pearly grey in color. Over-head is a sky-light of ground glass. The operating furniture is the latest, most improved that can be had. A Boldt table (the first one brought to the state), instruments and dressing tables, the newest basin irrigators, wall stands, etc., are included in the outfit. A complete steam sterilizing apparatus has been ordered and will be put in place shortly. When complete, this operating room will be equipped with all the necessary apparatus for surgical work. The new private rooms are models of their kind, having stained floors, soap-stone finish walls, electric bells and electric lights and furnished with white enameled iron and brass beds, etc. The hospital is doing good work, both in its medical and surgical departments. Just now there are upwards of twenty patients in the wards.

There now! An English medical authority, Mr. Bridger, announces that in the act of kissing we encounter only beneficial microbes, and that the advantages of kissing far outweigh the infinitessimal risk that it may occasion, for it furnishes us with microbes that are useful in digestion. This news is in good time for the "summer girl" with dyspepsia.

Dr. James H. Titterington (Bellevue '91) aged 33, died in Las Vegas, N. M., June 27, 1897, of tuberculosis.

It is reported that Mr. Geo. W. Vanderbilt will build a modern hospital at Asheville, N. C., to cost $100,000. It will be devoted to the treatment of contagious diseases in the poor who are not able to afford the expensive sanitariums. He could not erect a grander monument.

An Army Medical Board, to examine applicants for appointment to the Medical Corps of the United States Army, will be in session in Washington, D. C., during October 1897. Application must be made to the Secretary of War before September 1, 1897, giving the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from which they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal acquaintance, from at least two reputable persons, as to his citizenship, character, and habits. The candidate must be between twenty-two and twenty-nine years of age, and a graduate from a Regular Medical College, as evidence of which, his Diploma must be submitted to the Board.

Dr. J. M. DaCosta has had conferred upon him by Harvard College the honorary degree of Doctor of Laws and Letters.

Reading Notices.

It Quiets Pain and Promotes It.—Rather a paradoxical statement. True, nevertheless. When pain is useless, then antikamnia quiets it; when it is necessary, the same remedy increases it. This refers to the use of antikamnia in the pains of labor and as a promoter of labor pains.

H. C. Reimsynder, A.M., M.D., of Philadelphia, in a recent article says that whenever there is unnecessary pain in labor he administers ten grains of antikamnia, repeated in two hours, if necessary. In this way the pain which annoys the woman without helping her is relieved, while the uterine contractions become more firm and labor is accelerated.

Dr. R. B. McCall, Hamersville, Ohio, contributes an article to the *Woman's Medical Journal* on this same subject. He says: "In cases marked by unusual suffering in second stage, pains of nagging sort, frequent or separated by prolonged intervals, accompanied by nervous rigors and mental forebodings, one or two doses, five grains each, of Antikamnia Tablets, promptly change all this. Indeed in any case of labor small doses are helpful, confirming efforts of nature and shortening duration of process."

DOCTOR:—Your library is not complete without the Hypnotic Magazine. Cost of this handsome monthly, including premium book on Suggestive Therapeutics is only one dollar ($1.00) a year.

THE PSYCHIC PUBLISHING CO.,
56 5th Avenue, Chicago.

BUFFALO LITHIA WATER

Disintegrates and breaks down Urinary Calculi, both the Uric Acid and Phosphatic Formation, and other Varieties as well.

ANALYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

NEW YORK, December 3, 1896.

Dr. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

Dear Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection containing a number of fragments, and also the three boxes, each containing a single Calculus, mentioned in your letter as discharged by different patients while under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of each specimen, and designated them alphabetically.

One of Calculi from collection marked "A" was 9/16 of an inch in diameter, of an orange color, and on section exhibited a nucleus surrounded by nine concentric layers of a crystalline structure. On chemical analysis it was found to consist of **Uric Acid** (colored by organic substances from the urine), with traces of Ammonium Urate and Calcium Oxolate. A fragment of a broken down Calculus from the same collection was found to consist of **Uric Acid.**

One of the fragments taken at random from the collection marked "B" which was still more disintegrated than the preceding one, proved on analysis to be composed chiefly of **Uric Acid** and Ammonium Urate, with a trace of Calcium Oxolate.

The contents of the boxes marked "C" consisted chiefly of whitish Crystalline materials. On microscopic examination they exhibited well defined and prismatic crystals, characteristic of "Triple Phosphate." On chemical analysis they were found to consist of Magnesium and Ammonium Phosphate (triple phosphate), Calcium Phosphate, Calcium Carbonate a trace, Sodium and Potossium Salts in traces, Uric Acid and Urates none, Calcium Oxolate none, Organic debris in considerable quantity, and matters foreign to Calculi.

The fragments of Calculi in the collection marked "D" were numerous, and of sizes varying from small fragments to ⅞ inches in length, 9/16 inches in width and 5/16 inches in thickness. Some of the fragments were white and others were gray in color. On chemical analysis they were found to consist partly of the variety known as "Fusible Calculus," Ammonium and Magnesium Phosphate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in traces, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly spherical in shape, consisting of Crystalline layers from ⅜ to ¼ of an inch in diameter. They were of a brown color, and on analysis were found to be chiefly **Uric Acid**, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,

Analyses F, G and H, omitted for lack of space. R. OGDEN DOREMUS.

Water in Cases of One Dozen Half-Gallon Bottles, $5.00. F. O. B. Here.

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ntieth Year. SEPTEMBER 5, 1897. Vol. 41. NO. 5.

NORTH CAROLINA
MEDICAL JOURNAL.

PUBLISHED SEMI-MONTHLY AT $2.00 PER ANNUM.

Robert D. Jewett, M.D., Editor.

[Entered at the Post-Office at Wilmington, N. C., as Second-class mail matter.]

FROM all that has appeared in the medical press of late, our private correspondence with physicians, the interviews of our representatives with medical men in every State and Territory, there seems to be nothing so valuable as

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where dyspeptics are suffering from inability of the digestive organs to convert the starchy foods into sugars; and this is known to be the cause of most cases of dyspepsia.

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NORTH CAROLINA MEDICAL JOURNAL.

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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Original Communications.

CÆSAREAN SECTION.—REPORT OF CASE.

BY JAMES M. PARROTT, M. D. Kinston, N. C.

WITHIN the past few years the improvement made in the management of difficult labor, especially from pelvic contraction has been surprising indeed. This has resulted not only in reducing the maternal mortality, but in obviating very largely that form of murder which we politely call Embryotomy. Cæsarean section and symphyseotomy have come to occupy the most conspicuous positions among obstetrical operations and hence I shall depart just a little from the title of this paper to discuss their relative merits. In my opinion symphyeotomy should never be performed. We have been taught that it should be undertaken when the brim conjugate exceeds 2¾. I heartily agree with Dr. Price "I can deliver any woman by forceps or version that can be delivered by symphyseotomy" We cannot obtain the space the Italian surgeon would have us believe. When compared with conservative cæsarean section I find that symphyseotomy has a greater mortality for both mother and child, the difference as to the latter being especially marked. It is much more difficult to perform than cæsarean section, and thus is added a great danger to an already partially exhausted woman. The mother who is lucky enough to recover from symphyseotomy finds herself, in the great majority of cases, after a long and tedious convalesence, an invalid for life. The pubic or sacro-iliac joints (even if the latter are not ruptured) never regain there normal condition in 95 per cent. of cases. In considering this operation we should not forget the delay and manipulation of fully dilating the cervix; the risk of infection from the vagina and its discharges and unavoidable rupture of its walls. The laceration of the subpubic soft parts is very great and the hemorrhage from injury to the venous plexus surrounding the urethra is sometimes appalling and remarkably difficult to control. In the single case of this kind in which I assisted, I was compelled to infuse the saline solution because of the fearful hemorrhage at this point in the operation. Vesico-vaginal fistula is often a result and rarely heals spontaneously, Dr. Garrigues to the contrary. These are only a few of the objections to symphyseotomy picked up from practical observations and experience. If space permitted I could point out a score or so more, proven to be real by the experience of others. It is after all at the bed-side and not so much from text books, written by enthusiasts, that we must learn the relative value of cæsarean section and symphysetomy.

Indications: The cases which demand a cæsarean section are those which cannot be delivered by forceps or version. One word of warning; we should be very careful indeed in doing version in pelvic deformity or over large heads. If perchance we should possibly succeed in this and then find after delivery of foot or feet that the body could not be delivered (this would of course be rare) it would make matters worse, it then being absolutely necessary to sacrifice the child. It is difficult indeed to adjust the forceps in a case which cannot be delivered by them. In the appended case I applied them only after an unsuccessful attempt and then with much difficulty. The recollection of these two facts (very difficult turning and unsucessful attempt to apply the forceps) will under ordinary circumstances be of much aid in deciding when cæsarean section should be done. And when should it be done? I will say that each case must be decided upon according to its merits. Ordinarily, however, it should be performed when; 1st The conjugate diameter of the brim measures less than 3 inches. This should be modified according to the pliability of the maternal parts and the size of the child's head and the probable extent of its ossification. This can only be approximately determined, experience and educated touch being the best guide. But, says one, how about craniotomy in a case where the diameter of the brim permits it? To him I would say that we owe something to the child as well as to the mother.

Statistics show that the maternal mortality from embryotomy is *greater* than from cæsaren section. Then why should we continue this scientific murder of the infant when it is so fatal to the mother, the one it is intended to save? I would also say to the ones inexperienced along this line that cæsarean section is much the easier operation and as it is safer to the mother it is their duty to choose it rather than embryotomy. The cæsarean section should be performed, secondarily for pelvic mechanical obstruction as from fibroids, cancers and boney tumors, which connot be quickly and easily removed; thirdly, of course if the surgeon be at hand, it should be immediately done for a woman dying at the end of pregnancy, unless the obstetrician be absolutely sure that the child is dead; 4th very rarely "inflammatory changes, constrictions and uterine displacements" may require the operation.

Above all things let me caution the profession against procrastination in these cases. Do not wait until the woman is thoroughly exhausted and almost dead from frequent and rough attemps at version and in using the forceps. Determine at once, as soon as you reach the case, the true condition of affairs, and if without danger or risk you desire to wait a short time (say an hour or so) to prove postively that you are right, do so, but for the sake of the suffering woman, of all to be pitied, do not delay and remain in doubt too long. "Decide and act." To be very sucessful do not put off the operation as a last resort, but perform it early, if practical (the true condition of affairs having been accurately determined) at the very beginning of labor or even before. Learn something from the lesson that the results in cases gored by infuriated animals were formerly more favorable and better than those operated upon by the surgeon. The reason for this is obvious and needs no explanation. I believe that in determining *whether* and *when* to operate, if an error is made, it is better to err in favor of the cæsaren operation.

Dangers: To my mind the most common and chief danger lies in procrastination. We are too liable to defer the operation too long and to exhaust the patient by "tedious labors" and shocks from bruising and tearing the tissues by too frequent and rash attempts at version or forceps. By all means avoid this. The chief causes of immediate death are first, from hemorrhage; this can be very greatly almost entirely avoided by using the rubber tube (not trusting to the hands of an assistant), as described in the appended report of a case, and by the proper and careful introduction of uterine sutures; the diligent and judicious use of "saline infusion" may be needed to keep up "pulse volume"; secondly, it may be caused by eclampsia; avoid by previous preparation, treat by thorough anæsthetising until the operation is complete and follow it at once by bromide potash or sodium and digitalis; thirdly, immediate death may result from direct or indirect shock; avoid by doing operation *promptly*, as soon as possible, and by the use of proper stimulants and by abdominal pressure as soon as the pregnant womb is lifted from abdominal cavity.

Death *after* the operation may result from first, secondary shock and exhaustion; treat by judicious use of stimulants and stimulating diet, which should be begun immediately after the operation; 2nd, from post-partum hemorrhage (rare); treat as usual for any other case; 3rd, from septicæmia, peritonitis or metritis; avoid by being thoroughly aseptic as to instruments, patient, dressings, hands, water and all things else used in or about the the operation, managing and sterilising, as for any laparotomy, being particularly careful as to the sutures (especially uterine). The after-treatment goes a great ways towards saving the patient. This in my opinion should be the same as after Martin's myomectomy, except that a drainage is never needed and I believe, quinine and ergot (small doses) should be given to produce and keep constant the uterine contractions. I shall not weary the reader by further detailing the preparation and after-treatment, but shall refer him to any up-to-date obstetrical work (especially Dr. Edward Reynolds work on "Practical Mid-wifery") for these descriptions and for statistics on the subject. Permit me to quote, however, that by "a recent analysis of the literature of the world conducted with the idea of determining the prognosis of this operation under favorable conditions, it was discovered that 39 cæsarean sections had been performed by thirty operators with the result that all the mothers recovered and 38 children were saved." What brilliant results and that in face of the fact that most of the surgeons were doing the operation for the first time. I might go on at some length quoting almost, if not quite, as favorable results, but I will refrain and close by stating that in my opinion cæsarean section will be *the* operation of the future, and by reporting the following interesting case, hoping it may be of benefit to others and that it may prove a special warning to those who would for *any* reason *whatever*, procrastinate or hesitate.

Case: Mrs. B. white, dressmaker and housekeeper. Mother died from child-birth and "kidney trouble". Mrs. B. primipara and 25 years old. I treated her previous to pregnancy for an obscure form of indigestion and later for acute (mild) parenchymatous nephritis and advised against pregnancy. Examination when called on April 24th revealed the following facts viz: heart almost normal, (very slightly hypertrophied), lungs slightly edematous, liver enlarged (5¼ inches along its anterior border), stomach irritable and nausea severe; urine smoky and heavy and contained trace of albumen and hyaline and granular casts. She complained of severe headache and lumbar pain, flashes of light before the eyes and insomnia. She was very nervous and constipated. Pulse feeble, quick and rapid. Passed during the previous 24 hours about half a pint urine. General anasarca was *very* marked. The face was much swollen, almost beyond recognition. The labiœ majoræ were swelled to such an extent as to reach within 3 inches of the knees. Near the end of pregnancy.

When first seen I administered one ounce of epsom salts. In a short time bowels began to be painful followed by frequent watery stools, which very greatly reduced the edema. The usual diuretics with iron were added and continued to act nicely, while the patient was kept under observation, until May 1st (7 days after first being called) when labor began. When I arrived at 9.30 P. M. she was very restless, excited and frightened, and suffering very greatly from "true" pains. I ordered a vaginal douche and just as the nozzle was introduced a severe convulsion began (the first). As I was called when not at my office I was compelled to send for my instrument case when I reached the house which arrived at 10.15. I gave ½ grain morphia hypodermically and as soon as chloroform arrived I at once began its administration, which, by complete anesthetising quieted her. I then examined her and found the os the size of a silver dollar, pains steady and severe; the head could only be felt with great difficulty, and was lying with occiput to the right acetabulum. The pelvic brim was fairly narrow, conjugate diameter 3 inches. I waited an hour or so and as there was no improvement or advancement of the head, I attempted to apply the forceps (long) but failed, one hour latter succeeded and after much manipulation was able to even engage the head at the superior strait. The maternal parts were as firm and as steady as the rocks of Gibraltar. I then tried version but in this I failed, the "bag' having ruptured while dilating the os, and because of the firm tonic contraction of the uterus. I then determined (at 7 a.m.) upon doing cæsarean section, and at once began preparations for same. I was alone and being, at the time, unable to obtain consultation, I began the operation with no assistance save two plucky mid-wives (amateurs). I made a median incision and as I opened the peritoneum a large volume of fluid gushed out and greatly impeded and delayed the operation. I threw an elastic tube around the uterus near its neck and then lifted the fundus out of the abdominal cavity and as I was about to make the uterine incision I glanced up at the good lady who was administering the chloroform and noticed she had left it off. Just then the patient turned, groaned and became convulsive and died just as I made the first uterine stroke. I hurriedly completed the operation finding the placenta at the site of the incision. I did just as I would have done had the patient then been living,—I cut right through it and lifted out the child. It was dead. I closed up the abdominal wound hurriedly and turned the remains over to the family. What does this case teach? It teaches that we can perform the operation alone, under ordinary circumstances, with success. It also teaches that the conjugate diameter is not a criterion as to when or whether to operate, but that we should consider the size of the child's head, its probable ability to be well moulded, and also the pliability of the maternal parts and mobility of the pelvic joints. It is a warning against delay even if the delay is caused by waiting for assistance as in this case. It teaches us to study the individual symptoms and the condition and previous history of the patient (especially as to rheumatism and nephritis as in this patient) and warns us against blindly following the iron-clad text-book rules. In conclusion permit me to thank Dr. Jno. A. Pollock, one of our most eminent physicians, for so gallantly leaving his sick-bed and coming to my assistance, though he arrived upon the field of battle just as the enemy gained the victory,—after the death of the patient.

TREATMENT OF ACNE ROSACEA WITH MENTION OF A CASE.

By C. W. Hunt, M. D., Brevard, N. C.

PATIENT, female, brunette, aet, 18; she had the usual pimples etc., relating to puberty and nubility. At 19 years skin was clear and smooth and remained so till she was 23 years of age; at 23 she had just ceased to nurse her second child and was in a very reduced condition. Then the above disease appeared first on the fore-head; the eruption was profuse, parts thickly covered with little pimples and tubercles very red and greatly inflamed, great itching. This continued awhile and then "black heads" appeared, eyebrows were full. Noticed this eruption was *symmetrical*, each half of the forehead being alike affected, the eruption remaining on the forehead for two or three months, then the violence abated, then it appeared on *both* sides of the chin, under side and corners of the mouth.

A great many of these pimples or tubercles were like little boils, full of matter, and being squeezed out, would refill, then finally a black head would appear in old site of the point of eruption. The affection then appeared in a very violent form on *both* cheeks, then over *both* shoulders and on *both* sides of the cheek. The itching was *terrible* and obstinate all over the body, even where the eruption had not appeared. The scalp escaped.

I do not attempt to draw a pen picture of this disease. Suffice it to say that it was a typical case of very severe, obstinate, acute and then chronic acne rosacea.

The inflammation was so excessive at times that in the fleshy and soft parts of the cheeks, even besides the eruption, the deeper tissues were so inflamed, as to cause great thickening and swelling, causing a change in facial expression almost like erysipelas.

This disease continued in varying degrees of severity, with varying success and failure as to treatment, principally failure. When at the age of 23 patient had a severe attack of lagrippe—then the skin disease ran riot, and was fearful beyond description. At this date March 1894, the skin disease had been cured, having lasted 2½ years,and but for the treatment last used I believe that it would have never been cured.

Treatment. I was anxious to cure the case and selected the most approved modes of treatment. I first put patient on Fowler's solution of arsenic, which did little good. Then Donovan's solution of iodine, mercury and arsenic. This did no good and such irritation of stomach and bowels, that it was discontinued. I then prescribed tablets of iodide of arsenic, each gr.$\frac{1}{100}$—one after each meal—no good results. Then I prescribed granules of sulph. arsenic, each gr. $\frac{1}{50}$—one after each meal. This last caused quite a degree of improvement and really did a great deal of good, but the arsenic caused such intense pain in the eyeballs, super orbital pain and frontal headache, that its use was discontinued. Up to the time of using arsenic sulph, various ointments were used without benefit. White precipitate ℈i, vaseline ℥ ii was applied and did more good than other ointments, but was a failure as a curative treatment. By the way *do not* make a regular use of greasy ointments or mixtures, of vaseline or glycerine, on the face as they aggraviate the disease, make the skin soft and flabby and cause a growth of hair. If an ointment is used for any special purpose do not on any account allow patient to over-heat the face, by undue exercise or expose the face to heat of fire or sun. I will mention here that I gave a full trial to alkaline washes etc., and the regulation solutions of hydrg. chlo. corros, as an application, without the least benefit. Icthyol ointment also was a grand failure.

Now to the point as to what cured this case and others I could mention.

Allowing for some good obtained by the above mentioned internal administration of arsenic, the line of treatment and *general* management that cured was as follows—I desire to lay great stress upon the general management.

1st. Regular diet. Exclude hog meat.

Give Scott's Emulsion of Cod Liver Oil, (I might say in all cases) regularly, one teaspoonful after each meal, if the patient is reduced in flesh, or if there is any tendency to or inheritance of tubercle. If not, the local disease is a sign of the necessity for this emulsion, even if the patient is fat and has no sign of consumption or scrofula.

℞. Pills, Calcium Sulphide No. 100. (S. C. Abbotts—pure and freshly made). Sig—One pill *rĕgularly* after each meal.

Of course keep liver, bowels and stomach in proper condition by appropriate treatment.

Local treatment. Get the best *white* castile soap, carmel is the best; soap the hands and rub on the face and rub well into the skin, then wash off the soap *immediately*, with *very warm* water–do not have it too hot, as sometimes directed–then rinse the face in clear warm water; do this till *all* soap is removed from the pores of the skin, then dry the face with a soft towel; do not rub with towel or wipe too much downward, but simply pat the face dry. This is important. Apply and *remove* the soap as directed twice daily. Morning and night. For a few minutes after this make extra efforts to avoid sudden change of temperature from heat to cold.

Never use any soap but the kind mentioned.

For the first two nights after above soaping and washing apply pure vaseline all over the eruption and intervening tissue.

Allow it to remain all night, then remove next morning by use of above soap and water. Use this vaseline for two nights.

The vaseline is used to soften and cleanse the skin and liberate black heads. Then the second morning after the vaseline has remained all night, wash the face in soap and water *as directed*, then immediately squeeze every black head out of the skin, do not use too much pressure in squeezing, avoid bruising the tissues, use just enough pressure to remove the black heads and no more. Then commence and use the following application regularly which is "drawing", healing to skin, whitening and generally curative. Remember to use soap and water reguarly as directed.

℞—Sulphur Precip.		ʒ iv.
Gum Camphor		gr. xx.
Gum. Tragacanth		℈ ii.
Aq. Calcis	a. a. q.s	℥ viii.
Aq. Rosae		

M.—Sig.—Apply several times, with the fingers. *Shake bottle very well.*

The treatment must be used continuously and regularly; do not be discouraged; use it for months, if necessary, before expecting much improvement. The calcium pills combined with the local treatment mentioned give the best possible treatment, purify the blood, whiten the skin and complexion, stop the itching and cure the diseases. I do not believe that any other treatment would have cured the case and the disease I believe would have remained a lifetime. I am *certain* that this is the best treatment, I tried about everything else and know whereof I speak. Avoid all applications containing grease, the skin has already too much grease. Of course protect face from extremes of heat or cold. The advertised face mask is no good, have tried them.

Notice at stage of treatment where vaseline was directed to be used. Bismuth sub. nit. could be used just before using vaseline, if there was excessive redness, or a thick, swollen condition of the skin or a bumpy condition beneath the skin, with red swollen arears that will not come to the surface. A few applications of bismuth will reduce inflammation, dry the skin and cause the tissues to throw off in the shape and form of black heads, the immature pimples—I might say boils. *It is all important* how this bismuth should be used. Mix it in pure water, make a paste and apply it evenly and well to the skin, but *do not rub it in* the skin, just dab it on. It is a great mistake to rub it into the skin. If rubbed in it *does not* give the desired result and darkens the skin. This bismuth application could be allowed to remain all night.

Notice, even if treatment is successful the acne will of course be more active and troublesome at time of menstruation.

I believe in fact that anything that excites or depresses the *nervous* system, aggravates if it does not in part cause the acne, therefore, patients should avoid causes of undue excitement, anger, worry, depressing emotions, "blues" etc. The nervous system should receive careful consideration and all appropriate treatment.

I am aware of the fact that I have not mentioned any fashionable new medicine, but if my treatment is carried out fully and carefully to the letter, and everything watched and pushed by the physician, a cure will be the reward. Physician should not give general directions, but should see with his own eyes that the patient does everything directed, in the way it is directed to be done.

SUPRAPUBIC CYSTOTOMY FOR STONE. SOME COMPLICATIONS

By Virginius W. Harrison, A. M., M. D., Richmond, Va.

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ON May 22, 1897, I did a suprapubic cystotomy for stone on Paul A., white, age 16. After cutting through the abdominal parietes, I found the peritoneum presenting itself in front of the bladder,almost touching the pubic bone. It was some time before I was certain that the peritoneum was far enough out of the field of operation to make the incision into the bladder without doing harm to it, but this was finally accomplished, and without further trouble, a small mulberry calculus was removed. A catheter was placed in the bladder, and iodoform gauze loosely packed around it to favor rapid and thorough drainage ;and a stitch was taken in the upper angle of the wound, extra gauze being placed here to protect the peritoneum as well as possible. The patient was put to bed in good condition.

The usual preparatory treatment was administered: the bladder being washed out just before the operation, and filled with sterilized water, and the rectal bag was used.

The patient did well until 6 A. M., when he became restless and suffered pain in the abdomen; pulse 18, temperature 101.4°. At 12 M., pulse 110, temperature 103.2°, with all the symptoms of septic infection of the peritoneal cavity, viz: distended and rigid abdominal muscles, face flushed and anxious, nausea, etc. It was determined to open the abdomen immediately. The bladder was first washed out and the incision which had been been made in the bladder at the first operation was closed with interrupted silk sutures a catheter was placed in the urethra to insure drainage and to prevent the urine from soiling the peritoneum and wound after it had been washed and dressed.

On opening the abdominal cavity, the visceral and parietal pelvic peritoneum was found inflamed and bathed in a dirty sero-purulent fluid, an evidence ot fibrino purulent peritonitis. Near the bladder the peritoneum looked dark and very ugly, and in a few hours, without irrigation and drainage, would have been attended by diffuse suppuration or septic peritonitis. The cavity was irrigated for some time with hot sterilized water. The lower end of the peritoneal wound was closed with a continuous silk suture; the cavity well drained with iodoform gauze, and silk-worm sutures, placed in such a position as to close the abdominal wound after removal of the gauze. The patient was put to bed in a fairly good condition; pulse 120, temperature 101.2°. He rallied well with a steady decrease of temperature until May 26, at 2.30 P. M. The drainage had ceased, the gauze was removed, and the abdominal wound closed; temperature 100.6°, pulse 88, respiration 26. By 7.30 P. M. temperature 102°, pulse 89, respiration 26. A dose of salts was given, and at 9 P. M. an enema was administered with good effect, reducing the temperature to 100.8° by 10 P. M.

As he had been much nauseated, the patient was fed and stimulated by enemas. The bladder commenced to drain through the suprapubic wound on the sixth day after operation, showing that the sutures in the bladder had given way. The catheter was removed from the urethra. The abdominal wound soon became infected and sloughed somewhat. The abdominal stitches were removed on June 2d, and the wound dressed with chloral solution. From this time, the temperature varied from 98.8° to 99.6 until June 17, when at 6 A. M., the condition was temperature 101°, pulse 102, respiration 24, at 5 P. M. temperature 103.6° pulse 116, respiration 26; delirious, and in a condition of profound sepsis. The origin was difficult of location.

When not delirious he would complain of great pain in the head, back and abdomen, and of nausea. Refusing all nourishment, he was fed by nutritive enemas; and also was given one grain of calomel every hour until six grains had been taken, then a full high enema was given which proved very effective.

June 18, 9:15 A. M., temperature 100°, pulse 105, respiration 24, complained of feeling chilly, still nauseated and suffering in his head and abdomen; 5 P. M., temperature 103°, pulse 100, respiration 26. This condition continued, with morning temperature about 100°, and afternoon temperature 103°, until June 21, at 3:30 P. M., when he became very restless and weak, suffered intense pain in his back in the region of the right kidney, aching in his limbs, head, and abdomen, pulse 120, temperature 104°, respiration 34. Sponge baths of iced water and alcohol were ordered to be given every two hours, and the nurse was told to push stimulants and nourishment. The next morning at 8:30, a great deal of pus escaped from the suprapubic wound and continued for several days. Whenever an enema was given to wash out the bowel, he would pass urine through the urethra, which would be filled with pus. Temperature remained up until June 23, 4 A. M., when his conditioned improved. He looked and felt better; temperature 100° pulse 84, respiration 22. June, 25, he again suffered from absorption of pus, temperature going up to 103.4°. The wound was washed out, as has been done before with peroxide of hydrogen, every six hours. By the 28th, the temperature was normal, but would vary during each day, going as high as 100°.

The poor little fellow's troubles had not yet ceased, for on July 7, he had another rise of temperature it being at 6 P. M., 108°, with all symptoms of sepsis. The wound was draining well and freely, so another form of infection had to be sought. Later in the evening he passed a large quantity of decomposed mucus from the rectum, and continued to do so three or four times daily for several days, the temperature varying during this from 101.5°, to 103.8°. The trouble in the rectum was due, no doubt, to the effect of the nutrient enemata he had been having so continuously during his illness. After washing out the bowel for several days, the temperature was again brought down to normal by the 10th., remaining so until July 14, when it again rose to 102.6°, from the same cause in the bowel. After washing out the latter for a few days, it fell to normal and remained so. To-day he was removed to his home in this city with the abdominal wound nearly healed, water being passed *per viâ naturalis*, and in an apparently good condition after nine weeks illness.

Several interesting points might be brought out in reviewing this, but, in concluding I will only refer to two: 1. Suppurative septic peritonitis may follow suprapubic cystotomy without mechanical injury to the peritoneum. 2. The early, prompt, and thorough flushing of the abdominal cavity followed by drainage for suppurative septic peritonitis will save life, where a few hours delay would only bring surgery into disrepute; and the patient's life would be doomed.

COMPLICATIONS OF INTERNAL HEMORRHOIDS.

By W. O. Green, M. D.

Fellow of the British Gynecological Society; Member of Societe Francaise d'Electrotherapie; Chief of Clinic for Diseases of the Rectum, Kentucky School of Medicine; Associate Editor New Albany Medical Herald; Member of the Asst. Visiting Staff, Kentucky School of Medicine Hospital; Member Visiting Staff to the Masonic Widows and Orphans Home Infirmary; Member Consulting Staff to the Louisville City Hospital ect.

At the outset it may be presumed that pain is not a symptom of uncomplicated internal hemorrhoids, unless they become inflamed or strangulated.

While almost all rectal maladies may complicate internal hemorrhoids, the diseases which may usually be expected to co-exist are, fissures, ulceration, polypoid growths, and polypus, prolopse stricture, malignant disease, fistula and proctitis.

The most common of the diseases enumerated above is fissure, and its presence may generally be indicated by the characteristic pain. This is located at the anal orifice. It is of a burning nature and appears either during defecation or shortly afterward. The pain may also radiate across the perineum, up the back or down the thighs. In some instances it is referred to the genito-urinary organs. The fissure may be the cause of bleeding and give rise to a small quantity of discharge. If the lesion is located at the anal orifice, by carefully separating the adjacent folds of integument, the denuded surface will be exposed to view. If it is located inside the anus, its presence may be determined by the spastic condition of the sphincters and a superficial denudation of the mucous membrane, usually about the lower border of the internal sphincter, which sometimes can be outlined by digital exploration. In case the piles are inflamed the surgeon may first be made aware of the presence of the fissure after the dilatation of the sphincters.

This complication mav be relieved by dilatation, which is now generally practiced preparatory to operative procedure for hemorrhoids, but it is not always best to rely solely upon such a course. If the clamp and cautery operation is employed, it is well to pass the cautery over the surface of the ulcer, or it may be included in the superfluous tissue which is incised. Unless the hemorrhoids are removed by Whitehead's operation, the most desirable procedure consists of drawing a straight bistoury across the base of the ulcer, carrying it down through the fibres of the underlying sphincter.

An uncommon complication of internal hemorrhoids is ulceration of the rectum. Its importance, however, is sufficiently great to demand attention here. It may be suspected by the morning diarrhea, heavy pains about the lower portion of the sacrum, inside the rectum, and sometimes, about the front of the abdomen, in the lumbar region and through the perineum. The pain is much, if not entirely, ameliorated by defecation. There is tenesmus and a discharge which, in the early history of the disease, resembles the white of an unboiled egg. Later in the development of the disease, the discharge has the appearance of coffee grounds. The diagnosis may be confirmed by digital exploration, and occasionally by the employment of the speculum.

In all except the simple cases, the ulceration is the disease of prime importance and will require, usually, a course of treatment based on rest, cleanliness, local applications and proper diet. This form of treatment may precede or follow operation upon the hemorrhoids. The operative form of treatment of ulceration will be modified only according to the character of procedure the surgeon may select for the hemorrhoids.

It is the fibrous variety of polypoid growth which generally complicates internal hemorrhoids. These growths are commonly small and may be deposited over the surface of the pile.

When large polyei are present and located high in the rectal pouch, their existance may be suspected by the presence of a glairy discharge, a tendency to looseness of the bowels and an intense desire to strain at stool. Sometimes the growth may be seen to protrude with the hemorrhoids, or it may notbe discovered until the finger is passed over the surface of the rectum and comes in contact with an oblong or rounded tumor attached to the mucous membrane and submucous coat by a cord-like pedicle.

When attached to the surface of the hemorrhoid, these growths are taken away with the superfluous tissue which is removed during the operation. Should a polypus be located high in the rectal pouch, it is a matter of great importance to be most careful in its removal. These growths contain a small vessel, and when of moderate size, if treated by torsion, as some writers recommend, disagreeable, if not dangerous, bleeding is likely to occur. They should be gently drawn down with a tenaculum, and after securely ligating the pedicle close to the base, cut away with the scissors outside the ligature.

A more common complication is prolapse. The term "prolapse" is here intended to signify a modified condition in the mucous and submucous coats of the anus and rectum, which gives rise to a protrusion of a portion of the mucous membrane, from the anal orifice. With a long standing or extensive case of protruding internal hemorrhoids, this condition almost always exists. It sometimes becomes a source of annoyance to the surgeon, by reason of the difficulty to decide upon the character and amount of tissue to be removed by operative procedure.

The prolapse resembles the hemorrhoids, which it may complicate, in the tendency to protrude from the anal orifice, but differs from them in color. The color is pinkish and shows slight, if any variation from the contiguous mucous membrane. It seldom bleeds. The prolapse occasionally has a tendency to become inflamed or strangulated, but these conditions are more common in hemorrhoids. If the prolapse has reached an extensive size a small amount of mucus is sometimes discharged.

In dealing with a complicating prolapse, should it be small, the removal of the hemorrhoids will as a rule, remedy the malady. The relief by this procedure may be brought about by the taking away of a certain portion of the superfluous membrane, which is a necessary part of the operation, or it may be the result of an induced inflammatory condition in the submucous tissue, which binds down the over-lying mucous membrane. Should the prolapse be more extensive, it may be removed in the same manner that has been employed for the hemorrhoids. However, it should always be remembered to avoid a free excision, extending to the base of the tumor. In fact, it would be injudicious to remove the mucous membrane to the same extent that would be necessary in the removed hemorrhoids, for the reason that fibrous contraction is likely to occuru nless union can be obtained by first intention. The latter condition is not often procured.

When hemorrhoids complicate stricture or malignant disease of the rectum, the symptoms which are classic, are not sufficiently modified to give them in detail here. Piles generally occur as one of the later complications of these maladies, and attention should be given primarily to the stricture or malignant neoplasm.

The diagnosis of fistula, complicating hemorrhoids is not difficult, and its presence is sufficiently frequent to require always special search for an opening or sinus. There will be given a history of abscess, which has not been entirely relieved, and a purulent, sanguineous or watery discharge remaining to bathe, more or less constantly, the surface of the skin. Pain may be present in varying intensity, and it will generally be noticed that coincident with the cessation of the discharge and the appearance of a swelling the pain is greatly increased, and the pain is likewise remarkably diminished by a free evacuation of discharge. Examination will reveal one or more openings on the surface of the skin, in the neighborhood of the anus, generally marked by a small papule and surrounded by a circumscribed dermatitis.

In case of a blind internal fistula, the symptoms are more obscure. The patient feels, from time to time, a tender swelling, close to the border of the anus, which disappears in a day or two with discharge of pus from the rectum. Coincident with the discharge, there is relief from the pain. Passing the speculum into the bowel, a small ulcerated surface will be detected, with its edges so undermined that a probe can be passed some distance underneath the mucous membrane, thus outlining the track The extensive undermining enables the surgeon to differentiate this trouble from simple ulceration.

The principles governing the treatment of fistula are in no way altered when the disease is complicated with hemorrhoids. The two diseases should be operated upon at the same time. It may be said that where an internal opening exists, or where the main sinus, or tributary sinuses, burrow beneath the mucous membrane, the non-operative methods do not hold out much hope of permanent relief. It is well to remember that preliminary dilatation does not become necessary when the sphincters have been cut through. In some instances forcible dilatation may result in considerable laceration of the parts.

Proctitis may be numbered among the rarer complications of internal hemorrhoids. However, in the subacute form this disease coexists more frequently than is generally recognised, for the reason that many of the symptoms are attributed to the hemorrhoids and, with the dilatation and removal of the prime disease, the proctitis very often disappears.

In the acute catarrhal and sub-acute forms, the varieties which most commonly exists as a complication, proctitis usually manifests itself by the following symptoms: Frequent desire to go to stool, followed by tenesmus and a constant feeling that the bowel had not thoroughly emptied itself. The matter passed at first contains feces in large amount, but later, becomes small, thin and largely composed of bloody mucus. Pus is sometimes mixed with the stools. There is a sense of weight about the pelvis and irritation referred to the adjacent organs, especially the bladder. This disease always aggravates the hemorrhoidal trouble, especially increasing the size of the prolapse.

In the milder cases, which constitue the majority, the proctitis disappears with the relief of the hemorrhoids. But it sometimes becomes necessary to supplement the operation with treatment for the complicating malady. This should be rest in bed the administration of mild salines, to keep the motions in a semi-solid state, careful attention to diet and the local application of antiseptics and sedatives.

Allingham calls attention to two more complications which will be mentioned only incidentally. They are impaction of feces and relaxed sphincters.

In the first class of cases, the mass can be found easily by digital exploration. It can be removed after the preliminary dilatation and, before proceeding with the operation, the rectum should be thoroughly irrigated with some antiseptic solution.

Relaxed or feeble sphincters are to be looked for in old people in those whose general health is greatly depressed, and where the piles are very large and have protruded for a long time. These cases do not often require preliminary dilatation and in markedly relaxed states, some of the mucous membrane and skin may be removed during the operation, with the view of producing slight anal contraction, and toning, to some extent, the sphincter muscles.

Louisville, Ky.

POTASSIUM IODIDE IN CHOLELITHIASIS.

Dunin (*Gazeta Tekarska*, No. 22, 1896) states that during the last four years he has tried the internal administration of potassium iodide—five to ten grains twice daily—in about 100 cases of cholelithiasis, and has come to the conclusion that the drug is one of the best remedies for the disease. The most striking effects are obtained in cases where the attacks of hepatic pain, while of moderate intensity, occur very frequently, or where the pain is almost continuous. In the violent attacks occurring at long intervals, the results of the administration of the iodide are much less pronounced.

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ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

DR. CORNELIUS KOLLOCK.

This distinguished and gifted surgeon has passed away—death has closed his earthly career, and we mourn because the profession of the South has lost one of its brightest and most distinguished members; because the JOURNAL has lost one of its ablest collaborators; because we have lost a personal friend.

Dr. Kollock was born near Cheraw, South Carolina, December 27, 1824, and died at his home in Cheraw August 16, 1897, being nearly 73 years old. He graduated from the medical department of the University of Pennsylvania in 1848, studied two years in Paris, under the most noted medical men of that day, and settled in Cheraw in 1851 to practice his profession. He took a deep and active interest in all that pertained to his profession and soon began to rank as a leader. He was a constant attendant at the meetings of his county and State societies, where he enjoyed great popularity. Wherever Dr. Kollock was there would be seen a throng of the younger men, especially, surrounding him, listening to the words of wisdom that fell from his lips, or to some of the amusing anecdotes, of which he had ever an ample store.

He had a truly scientific mind, and was an industrious student. He once said to the writer that while it required much more labor to write a paper than to read it after it was published, the author always derived so much more benefit from it than the readers that it was fully worth the trouble. His contributions to societies and journals were very numerous, and were always well received, always exhibiting evidence of deep study and originality. During his latter years he devoted much attention to abdominal surgery, and it was his success in this branch of surgery especially that carried his reputation beyond the limits of his own State.

For many years Dr. Kollock was President of the Pee-Dee Medical Society, was President of the South Carolina Medical Association in 1887, President of the Southern Surgical and Gynecological Association in 1894, and Vice President of the American Gynecological Society in 1892.

No man ever more truly deserved the love and respect of those among whom he lived than did this genial and kindly old gentleman, and none certainly could have had it more thoroughly. The correspondent of the Charleston *News and Courier* says "all business was suspended, as everyone was desirous of paying a last tribute to Cheraw's prominent and beloved citizen."

We hope, at a later date, to present a fuller and more worthy sketch of this noble son of South Carolina.

THE MICROBE OF YELLOW FEVER.

No other infectious disease threathens the South so much as yellow fever. The close connection between this country and Mexico, where the disease is common, and the nearness of the West Indies, where it is endemic, are reasons for eternal watchfulness on the part of the health officers of the Gulf and South Atlantic States.

The nature of the disease would make it almost certain that it is of germ origin, and for years efforts have been made to disover the causative germ, but so far without success. At various times, indeed, one observer or another has described a germ which he claims to be pathognomonic, but closer and more extended investigation would invariably prove the claims to be without foundation, and the germs to be identified with those occurring in other conditions. Recently two observers, SANARELLI, of Montevideo, and HAVELBURG, of Rio de Janeiro, published simultaneously, though working independently, in *Annales de l'Institut Pasteur*, the conclusions derived from their investigations. A résumé of these two papers is published in the Public Health Reports for July 30, 1897, and the full text of DR. SANARELLI's paper appears in the Medical Record of July 24. Both of these observers claim to have discovered the specific organism of this disease and present a specimen of the microbe said to be the cause of this terrible malady. It appears certain, however, that one of these is wrong, and it remains to be seen whether both are not. SANARELLI claims that the failure of attempts to transmit yellow fever experimentally is due to the fact that the black vomit was used in trying to communicate the disease. He says "Now we have seen that the "bacillus icteroides" not only does not have its seat in the stomach, but also, even when it is found by chance in that organ, it is because it has been drawn along by the blood, and is found consequently in a condition of extreme dissolution." Again "the black vomit is due to the action of the gastric acid upon the extravasated blood in the stomach. The vomiting itself is directly provoked by the specific emetic action of the toxines of the bacillus icteroides circulating in the blood." On the contrary, HAVELBURG says "The idea of looking for the specific germ of yellow fever in the contents of the stomach and intestines naturally suggests itself. Yellow fever begins with gastric symptoms. This condition of the stomach and intestines continues throughout the disease." He concludes from his studies that "yellow fever is a disease, the toxic specific agent of which enters into the stomach and intestines, where it develops. It is only in exceptional case that it invades other organs, and then only in small quantities.

The microbes described by these gentlemen seem also to be entirely different. That described by HAVELBURG when compared in its characteristics to the colon bacillus, leads Passed Assistant SURGEON GEDDINGS, of the U. S. M. H. S., in a discussion of these two papers, to say that he thinks it must be admitted that HAVELBURG has simply added another one to the list of investigators who have fallen victims to the deceptive appearances of this omnipresent colon bacillus." The germ described by SANARELLI seems to be one unknown before. He describes it as a little rod with rounded extremities, united at best by pairs in cultures and in groups in the tissues, from two to four micromillimeters in length, and from one third to one half this in width. It does not reside in the digestive tube, but is found in the circulating blood and in the tissues, and its poison instead of being absorbed through the intestinal wall, is fabricated in the interior of the organs and in the blood. On account of the mixed nature of the infection in yellow fever, SANARELLI has been able to isolate the germ in only fifty-eight per cent. of the cases. He recommends as the best way to demonstrate its presence and also its especial tendency to arrange itself in groups, that a fragment of the liver taken from a fresh cadaver be placed in the incubator for twelve hours, as this favors the multiplication of the specific microbe. Grown in the incubator at 37° C., the colonies present an appearance that does not differ from that of other microbes; but when grown at a temperature of 20 to 22° C. they appear like drops of milk, opaque, projecting and with pearly reflections. By exposing cultures for twelve or sixteen hours to the temperature of the incubator and then other twelve or sixteen hours to the temperature of the air, the colonies show themselves to be constructed with a flat central nucleus, transparent and azure, having a peripheral circle prominent and opaque. This peculiarity suffices to distinguish it from all other microbes previously known.

It is a facultative anærobe, and does not resist the Gram stain; it does not coagulate milk or liquefy gelatine; it does not produce indol, and is very resistant to drying; it dies in water at 60°C. and after seven hours exposure to the solar rays. It lives a long time in sea water. The microbe is pathogenic to most mammiferous animals, the dog being the most susceptible, while birds are completely refractory. Experiments were carried out in the human subject five times. In these the injections were subcutaneous in two, and intravenous in three. The author says "The injection of the filtered culture in doses relatively small reproduces in man typical yellow fever. The fever, the congestions, the hæmorrhages, the vomit, the fatty degeneration of the liver, the headache, the backache, the nephritis, the anuria, the jaundice, the delirium, the collapse—in fine all that conjunction of anatomical elements which constitute by their combination the indivisible basis of the diagnosis of yellow fever, I have seen unroll before my eyes."

Dr. Sanarelli is inclined to doubt that the microbe enters the human body through the alimentary canal, but that there is good reason to believe that it is diffused through the air. When the epithelium of the digestive tract is intact, in general it does not permit the entrance of any sort of pathogenic germ. However the slightest disorder of the digestive functions, the abuse of alcoholic and iced drink, and of fruits, etc., constitute just so many factors to determine at once the yellow fever. The author advances an entirely new and interesting reason for the tenacious persistence of the "bacillus icteroides" on board ships, where it keeps itself especially in the bilges, holds, store-rooms and all narrow and confined places. This persistence is attributed to the heat, moisture, darkness, and want of ventilation, only because these conditions favor the growth of the common moulds of the atmosphere, which moulds, he has ascertained, constitute the great protectors of the "bacillus icteroides." This favorable property of mould can be demonstrated by placing the spores of any sort of mould upon a layer of gelatine previously sowed with microbes of yellow fever, which, as often happens, has remained steril. Scarcely has the mould begun to grow when colonies of the "bacillus icteroides" begin to appear, and become more numerous with the growth of the mould. The growth of themicrobe is less vigorous the greater the distance from the stalk of mould, thus showing the mould to have a radius of influence, differing in extent with different varietiesof mould, but always regular and equi-distant from the centerwith any given variety.

Dr. Sanarelli has been very earnest and scientific in his investigations, and has certainly described a microbe before unknown, and has apparently demonstrated its close relation to yellow fever, but it will require more time and more extended investigation to convince us of the certainty of the author's claim that "we have learned to know the specific agent of yellow fever; we have it in our power; we have studied minutely its life, its habits, its wants, its relation to external agents and to other small organisms; we have revealed the complicated mechanism of all the infinite manifestations which this agent determines in the human organism, and we have finally placed this disease, which a few months ago was a horrible mystery, on the same level as that occupied by the other great infectious diseases."

Reviews and Book Notices.

A Reference-Book of Practical Therapeutics.—By various authors. Edited by Frank P. Foster, M. D., Editor of the New York Medical Journal and of Foster's Encyclopædic Dictionary. In two volumes.—Vol. II. D. Appleton & Co., New York, 1897.

The first volume of this work was published in 1896. The present volume completes the work, the whole comprising upwards of twelve hundred pages.

Among the contributors to the second volume are Drs. Samuel T. Armstrong, Samuel M. Brickner, Edward Bennett Bronson, William B. Coley, Floyd M. Crandall, Jeremiah T. Eskridge, Matthias Lanckton Foster, Arpad G. Gerster, Henry A. Griffin, Charles Jewett, Howard Lilienthal, Russel H. Nevins, Austin O'Malley, George L. Peabody, Frederick Peterson, Samuel O. L. Potter, Charles Rice, Solomon Solis-Cohen, and James T. Whitaker. The volume begins with "Napelline" and ends with "X-Rays."

The two methods of treating germ diseases, nuclein treatment, and serum treatment, which are attracting so much attention at present, are carefully discussed, the former by Dr. Jeremiah T. Eskridge and the latter by Dr. Austin O'Malley. Dr. Eskridge thinks that the beneficial results alleged to have been obtained from the use of nucleins have not come to us surrounded with sufficiently accurate and scientific observations to enable us to accept them unqualifiedly, though theoretically, nothing could be more fascinating than the contemplation of the possibilities of the nucleins in the prevention and cure of disease. The subject of serum-therapy embraces twenty-four pages, and covers the whole history of antitoxines in a concise but satisfactory manner. The results of serum treatment of diphtheria, streptococcus infection and even tuberculosis have been more satisfactory than in the case of nuclein. In the treatment of tuberculosis Maragliano reports the dissappearance of the fever in 176 out of 322 cases; the local signs disappeared in 27 per cent., were improved in 41 per cent. There was increase of weight in 57 per cent., and the tubercle bacilli disappeared in 43.2 per cent. Paul Paquin reports 226 cases treated with the serum of his own manufacture, by himself, and others. These show 40 recoveries that seem complete and permanent; 3 recoveries with the lesion *in statu quo;* 41 improved and capable of performing usual duties; 69 less improved; 32 deaths; 41 passed from observation.

A supplement of forty-six pages brings the whole work up to date, and an excellent index of one hundred and sixty-seven pages makes the work one of the most convenient yet published.

Every subject to which we have referred shows careful and consciencious study on the part of the author, and Dr. Foster's ability as an editor of the higest order is apparent on every page.

Abstracts.

INTUSSUSCEPTION.—D'Arcy Power (*International Journal of Surgery*) summarizes his experience as follows: Intussusception is a condition which brooks no delay in its treatment, for something must always be done at once, except, perhaps, in those slight cases which are indistinguishable from severe colic. In all doubtful cases purgatives should never be used. The routine treatment is to chloroform, high enemata of best saline solution, the fluid being allowed to remain in the intestines for at least ten minutes. The earlier this method is adopted after the appearance of symptoms the better are the results obtained; but it should not be adopted in enteric intussusception, in cases where the symptoms are very acute, or in those where the abscence of signs or symptoms, with a subnormal temperature, leads the surgeon to suspect gangrene of bowel. In these cases and when the intussusception is not reduced after irrigation has twice been tried, or when after reduction the intussusception has thrice recurred, the abdomen must be opened. The surgeon must then be prepared to deal effectually with the conditions he may find by such operative means as he can carry out with the least amount of shock and in the shortest space of time that is compatible with the safety of the patient. He should bear in mind that hardly a case can arise in which he is justified in closing the abdominal wound without an attempt to complete the operation by reducing or removing the intussusception. Such half measures as the formation of an artificial anus are hardly ever justifiable, and the results thus obtained are, usually, most disastrous. In the light of our present knowledge, it appears that the use of a button or bobbin is most likely to give good results when enterectomy is necessary, while Maunsell's operation is best adapted for the cure of ileo-cecal and colon-colic forms of intussusception.—*Uni. Med. Magazine.*

KOCH'S NEW TUBERCULIN.—Maragliano (*Gazz. degli Osped. e delle Clin.*) gives the results of his experiments with Koch's new tuberculin on men and guinea-pigs. According to Koch, the new product differs from the old in producing no pernicious effects and in containing bacillary substances not soluble in glycerine. As regards the first, Maragliano finds that the difference is chiefly one of dosage, and that if the old tuberculin is given in correspondingly small doses, no more bad effects follow its use than with the new product. Moreover, the therapeutic effects are the same. As regards the second, experiments showed that this supposed insolubility in glycerine did not exist. In the author's opinion it is not necessary to induce reaction in the tuberculin treatment, but to stop just short of that; and it is just because the new tuberculin does this (chiefly because of its smaller dosage) that it may be more beneficial. —*Brit. Med. Jour.*

RESIDUAL GONORRHEA.—Sanger (*Annals of Gynecology and Pediatry*) states that in progressed gonorrhea, where the infection has long since been extinguished, there is left in the tissues numerous characteristics, even specific signs, which he terms residual. The residual signs may affect the vulva, urethra, vagina, uterus, adnexa, pelvic peritoneum, the parametrium, and rectum. The *vulva* as *vulvitis maculosa persistens*,—an affection of the mucous membrane of the vestibule around the duct-openings of the glands of Bartholine. As a glandular adenitis of the glands of Bartholine, the glands being felt on one or both sides as hard nodules, the size of a pea or hazel-nut, as a round or oval, shallow, clearly circumscribed ulcer, which is exterior and inferior to the duct-opening which he believes is a result of abscess of the gland rupturing after necrosis of the mucous membrane. Or a cyst of Bartholine's gland, which is the most frequent residual sign in the vulva.

The *urethra* as a *urethritis maculosa externa persistens*,—the formerly described, sharp, limited, dark-red spots or rings of the external meatus. As various forms of chronic urethritis, analogous to those of the male urethra described by Oberlander. As strictures, which are the most common cause of vesical and urethral tenesmus where the urine is normal. As chronic periurethritis in the form of a ridge the thickness of a ring-finger.

The *vagina* as a *colpitis maculosa persistens.*—The mucous membrane of the vagina and vaginal portion of the cervix, especially those parts which have few folds, show dark-red spots similar to the maculæ of the vulva. As *colpitis granularis persistens*, described as vaginitis papulosa. The granules or nodules are smaller and harder than those of acute granular colpitis of pregnant women. He believes also that certain cases of *colpitis atrophicans obliterans* and *colpitis senilis hemorrhagica* certainly depends on gonorrhea; also many cases of pruritus vulva.

The *uterus* may be involved as *endometritis* and *metro-endometritis chronica post-gonorrheica.* He says in cases in which considerable time has elapsed since gonorrheal infection and repeated examinations of uterine secretions have failed to show gonococci, even where the discharge is quite purulent, and those in which it has been artificially increased, it is permissible to assume that we have to deal with a residual form of gonorrhea. As a perimetritis chronica post-gonorrheica this affection in a pure form, not as a part of a pelvo-peritonitis diffusa, is rare except aa a gonorrheal affection.

The *adnexa uteri* and *pelvic peritoneum.* It appears as salpingitis, perisalpingitis, oöphoritis, perioöphoritis, and pelvo-peritonitis chronica residualis.

The *pelvic cellular tissue*,—the parametrium. Here it cannot be decided whether it is gonorrheal in origin until gonococci are found in the acute exudate.

The *rectum.* Stritures of the rectum, he says, are obscure in etiology, but are to be regarded as largely gonorrheal.

PURULENT CYSTITIS.—In the treatment of cases of cystitis the internal administration of drugs which have the power of preventing decomposition of the urine is generally recommended, especially in that large class of patients where irrigation of the bladder with antiseptic solution cannot be efficiently carried out. Salol has been extensively employed for this purpose, but according to Dr. P. Hamonic (Wien. Klin. Rundschau, N. Y. Med. Jour.) a still more satisfactory drug is lycetol which he has tried in sixteen cases of purulent cystitis. He observed that this drug exerted a very favorable action on the suppuration, and retarded the decomposition of the urine. In gonorrhœa he also found it serviceable in the acute stage, and in six cases rapid improvement occurred under its use. In a case of stricture of which the only symptom was a slight non-purulent discharge occurring in a neurasthenic patient, it caused the disappearance of the discharge in a most unexpected manner.

FACE PRESENTATION.—Gessner (*Centralbl. f. Gynäk.*, No. 22, 1897) admits that in individual cases no satisfactory explanation of face presentation can be found. Obstetricians should report every case where fair evidence exists that some condition favors this presentation. In one of his own the patient was in her eleventh labor. He detected a spastic stricture in the lower uterine segment, which projected into the uterine cavity so as to hold back the fœtal occiput. The spasm was suppressed by narcotics and warm applications, and the presentation was spontaneously converted into the first vertex position, and delivery followed. This case suggested, in Gessner's opinion, Freund's theory that rheumatism of the uterus is a cause of face presentation. In a second case there was nothing remarkable at the labor; the child was born asphyxiated. and died on the next day. The cranium was remarkedly dolichocephalic, and the posterior arm of the head lever was nearly a centimetre longer than the anterior. As the deformity was one of the scapho-cephalic variety, it must have originated in the course of development in the uterus, and not during the process of labor. The case supports Hecker's theory. In the discussion on Gressner's paper Müllerhein supports Freund's theory. He had seen many cases like Gressner's first at Strassburg, where Freund had detected a relation between rheumatism and abnormal presentation, so much influenced by climate. Nagel and others supported Hecker's theory, having detected deformities of the occiput in face presentation.

Therapeutic Hints.

For Gastric Indigestion.—In cases of gastric indigestion accompanied by what is commonly called torpidity of the liver, the following combination will be found of great value:

℞—Ac. nitromuriat. dil.	℥ ss
Tr. nucis vom.	ʒ ii
Liq. potass. arsenitis	gtt. lxxii
Ess. pepsin, q. s. ad.	℥ vi.

M. Sig. Dessertspoonful thrice daily after meals.—*Med. News.*

Food for Infants.—In the gradual *substitution of starchy food for milk* in the feeding of infants, Dr. Wells does not consider it necessary to use an artificial food. Starch can be introduced by adding to the milk a small quantity of oat or barley jelly. These can be made as follows (Roberts' formula):

About 4 ounces of course oatmeal are allowed to soak in a quart of cold water 12 hours. The mixture is then boiled down so as to make a pint, and is strained through a fine cloth while hot. Keep this jelly on ice until used.

Barley jelly can be made by taking 4 ounces of barley flour, and preparing in the same manner as for oat jelly.

About equal parts of jelly and milk should be used. If laboratory milk is employed, the quantity of sugar and fat should be slightly reduced, as the starch in these jellies (particularly oat jelly) adds much to the heat-producing qualities of the food. —*Phil. Polyclinc:*

FOR DYSPEPSIA.—The well-known "R. & S. Comp." mixture, than which no combination is so frequently prescribed at dispensaries, is composed of the following:

℞—Pulv. rhei	ʒ iv
Sodii bicarb.	ʒ j
Spts. Menth. Pip. . .	ʒ ij
Aquæ, q. s.	℥ iv.

M.—Sig. A dose one teaspoonful.

FOR CHRONIC CONSTIPATION.—An excellent combination in pill form for chronic constipation is the following:

℞—Ext. nucis vomicæ	gr. vi
Ext. Belladonnæ	gr. iv
Ext. colocynth, comp. . . .	gr. xlviii
Aloes (purified) . . .	gr. xxiv.

M., and ft. pil. No. xxiv. Sig. One at night.—*Med. News.*

THE PUBLIC SERVICE.

NAVY.

For the two weeks ending August 28, 1897.

August 14.—Assistant Surgeon F. L. Pleadwell, detached' from the "Texas" Aug. 17 and ordered to the "Nashville' Aug. 19.

Assistant Surgeon W. H. Wheeler, detached from the "Origan" Aug. 23 and ordered to the Mare Island Navy Yard for duty in connection with the "Marietta."

Aug. 20.—Assistant Surgeon D. H. Morgan, detached from the "Monongahela" and ordered to the "Cincinnati."

Surgeon A. G. Cabell, detached from the "Monongahela," ordered home and be ready for sea.

August 25.—Assistant Surgeon W. M. Wheeler, detached from the "Marietta" and ordered to the "Wheelen" Sept. 2.

Past Assistant Surgeon G. Rothganger, detached from the "Wheelen" and ordered to the "Marietta" Sept. 2.

ARMY.

From August 12 1897, to August 18, 1897.

Leave of absence for one month to take effect upon his relief from duty at Fort Premble, Maine, is granted Captain Henry S. T. Harris, Assistant Surgeon.

Leave of absence for one month with permission to apply for an extension of one month, is granted Captain Henry A. Shaw, Assistant Surgeon, Fort Snelling, Minn.

Leave of absence granted 1st. Lieutenant Charles Lynch, Assistant Surgeon, Fort Robinson, Neb. is extended one month.

Leave of absence for one month, to take effect about Sept. 1st. 1897. is hereby granted Captain William H. Arthur, Assistant Surgeon, Fort Meyer, Virginia.

Major Paul R. Brown, Surgeon, having been found by an Army retiring board permenently incapacitated for active service will proceed to his home and await retirement.

The order directing Major Paul R. Brown, Surgeon to report for duty at Fort Keogh, Montana, upon being relieved from duty at Fort Hamilton is revoked.

Captain William B. Banister, Assistant Surgeon, is relieved from duty at Fort Crook, Nebraska, and ordered to Fort Reogh, Montana, for duty.

Miscellaneous Items.

Dr. Hunter McGuire, who has been visiting Bar Harber Maine, has returned home much improved in health.

Alumni of the University of Virginia will regret to learn of the death, on the 16 of April last, of Major Green Peyton, who for over thirty years was Proctor of the University.

Dr. Wm. M. Polk is said to receive the largest income from his practice of any physician in New York. His annual income is said to be $100,000.

Dr. Geo. H. Mallett, of New York City, while answering an emergency call, a few days since received a fall from his bicycle, fracturing two bones of the hand. The fall was caused by a turn to avoid a collision.

It now turns out that the report that Mr. Vanderbilt is to build a hospital in Asheville, is altogether false, as his manager says he never had any such intention. But it would be a very good thing for Cousin George to do.

The following officers were elected by the American Public Health Association: President—Dr. Benjamin Lee, Pennsylvania; Vice President—Dr. Felix Formento, Louisiana; Secretary—Dr. J. N. Hurty, Indiana; Treasurer—Dr. E. Pelletier, Quebec. Detroit, Michigan, was selected as the place of next meeting.

MEDICAL RESPONSIBILITY.—A French surgeon was recently condemned to two-month imprisonment and a fine of 500 francs because of the death of a patient upon whom he had done a laparotomy for the removal of a fibroid tumor, and in whom a pair of forgotten forceps was found *post-mortem.* He entered an appeal, with the result that his imprisonment was increased to three months.—*Med. Record.*

A CASE OF CÆSAREAN SECTION.—The Cæsarean operation was performed on August 16th, at the New York Maternity Hospital, Blackwell's Island, by Dr. J. Clifton Edgar, upon a colored woman, the subject of a generally contracted rhachitic pelvis, with spinal curvature. Height of patient 4 feet 8½ inches. The indication for the operation was looked upon as an *absolute* one by the attending surgeons who examined the case, as the true conjugate of the pelvis, measured manually and instrumentally with the Farabœuf pelvimeter, the patient being under chloroform, was found to be 2¾ inches. The patient was in her thirty-eighth week of pregnancy and not in labor at the time of operation. Rapid bimanual dilatation of the os was performed as a preliminary and precautionary measure to secure thorough subsequent drainage. The operation occupied forty minutes and a living female child, weighing five pounds, 17½ inches long, and with a biparietal diameter of 3½ inches, was readily extracted. Nine days after operation mother and child are in excellent condition, the mother nursing her child. Highest temperature of patient during this period 100.4° F.—*Med. News.*

COLORED WOMEN PHYSICIANS.—Dr Cornelia Kahn, of Cleveland Springs, N. C., referring to a statement that Dr. Emma Wakefield, of Louisiana, was the first colored woman to graduate in medicine, says that the Woman's Medical College of Pennsylvannia has been graduating colored women for years. "One, the wife of a minister in Philadelphia, has been practicing with success for at least fifteen years. This spring, a colored woman physician, Dr. Brown, passed the State examination with more credit than her dark brothers, and better than some of the white candidates. She is now serving as resident in the hospital for colored people in Charleston, where they have also started a training-school for nurses."

AN OLD CUSTOM.—It was formerly the practice among physicians to use a cane with a hollow head, the top of which was gold, pierced with holes like a pepper-box. The top contained a quantity of aromatic powder, or of snuff, and on entering a house or room where infectious disease prevailed, the doctor would strike his cane on the floor to agitate the powder and then apply it to his nose. Hence all the old prints of physicians represent them with canes to their noses.—*Exchange.*

HONORARY MEDICAL DEGREES.—*Apropos* of the editorial in the *Journal* of August 14 concerning the conferring of an honoray fellowship in the Royal College of Physicians on the Prince of Wales, it may be of interest to note that the first medical degree granted on this continent was an honoray one, bestowed on Daniel Turner of Connecticut by Yale College in 1720. As this was intended as a token of gratitude for Dr. Turner's liberal gifts to the college and not as a recognition on any particular fitness on his part to practice medicince, a wit of the time interpreted M. D. to signify *multum donavit.* Francis R. Packard, M. D. in Jour. Amer. Med. Asso.

PROMISCUOUS USE OF HANDKERCHIEFS.—One of the commonest maladies is "cold in the head," or, as it is technically called, "coryza." It is notoriously infectious, and the means of communication is the discharge from the nostrils. I am satisfied from repeated observation that this troublesome affection often spreads through a family of children and then through an entire household through the promiscuous use of thepockett-handkerchief. A little child comes to the nurse with the request, "Blow my nose." This is carelessly or thoughtlessly done with the parent's or attendant's pocket-handerchief, which has become infected and spreads the attack. In other cases the soiled pocket-handkercheif is allowed to dry without disinfection, and the dried discharge from the diseased mucous membrane of the nose is then diffused through the air, spreading the malady just as measles is spread.—MOORE.,in Proceedings of Dublin Sanitary Association.—*Med. Age*

THE TRANSPORTION OF BODIES DEAD OF INFECTIOUS DISEASES.—The following recomendations for the transportation of dead bodies was with some unimportant changes, adopted at the recent meeting of the American Public Health Association, after a three hours debate:

1. The transportation of bodies dead of small-pox, Asiatic cholera, yellow fever, typhoid fever or bubonic plague is absolutely prohibited.

2. The bodies of those who have died of diphtheria, scarlet fever, glanders, anthrax or leprosy, to be accepted for transportation only when prepared for shipment by being thoroughly disinfected by arterial and cavity injection, disinfecting and stopping of all orifices with absorbent cotton and washing the body with disinfectant.

3. Bodies of those dead of typhoid, puerperal fevers, erysipelas, syphilis or other dangerous, communicable diseases may be prepared for shipment by filling cavaties with improved disinfectant, washing the exterior of the body and stopping all orifices with

absorbent cotton. In cases of contagious, infectious or communicable diseases, the body must not be accompanied by persons or articles which have been exposed to the infection.

Reading Notices.

Dr. John F. Russell, in an article on emulsions published in the *New York Medical Journal* of January 23d, enters a vigorous protest against gum arabic and tragacanth as emulsifying agents. He says: "Fat is a necessary article of diet. When a physician prescribes oil or fat, he attemps to supply in a concentrated form what the healthy individual obtains embodied with his other daily food. He tries to supply a deficiency of food. Whether this deficiency be the result of less fat taken with the food, or an increased consumption within the body, is of no importance in this connection. The plain fact is that the individual lacks fat, and fat is essential to health. When the physician prescribes an emulsion of fat he furthur attemps to present the fat to the absorbing vessels of the bowel ready for immediate absorption. He prescribes a predigested food. Gum arabic and tragacanth are not foods. In former years gum arabic was regarded as nutritious. The United States Dispensatory for 1892 says;,,It has been used as a food, but has very little if any nutritive value.' Tragacanth is much more commonly used because of its cheapness. It is even of less value. It is insoluble in water and passes with difficulty through animal membrane. And yet we are compelled, when prescribing an emulsion, to give not less than fifty per cent. of these substances or mixtures which we know to be inert."

When writing this article Dr. Russell evidently did not know of the Egg Emulsion of Cod-Liver Oil lately placed upon the market by Parke, Davis & Co. This preparation is certainly the most valuable of its class ever directed to our attention. Contains no gum arabic, no tragacanth, but is emulsified solely with fresh eggs and flavored only with a fine quality of brandy. It contains full forty per cent. of cod-liver oil. Cod liver oil, eggs and brandy; every ingredient a nutrient. It is all food. Examined under the microscope this emulsion shows as perfect and minute a division of the oil as in milk. It is exceedingly palatable—in fact, an ideal emulsion.

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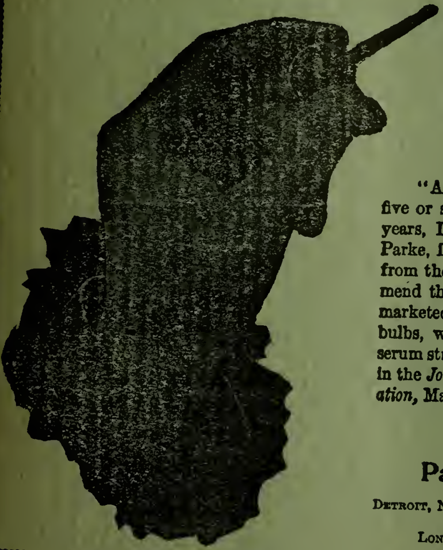

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LAW VS JUSTICE.*

By G. T. Sikes, M. D., Grissom, N. C.

FROM a scientific standpoint Law is reckoned as a subjective branch of science, while medicine is an objective branch. But when the two combine the objective is consumed by the more potent factor and all then must be so fabricated as to stand a logical analysis ;the offspring must be equal to the standard of the best parent. Law in a broad sense, which cannot be discussed here, only in definition, is a rule of action, laid down or prescribed by a superior power for the protection of the good and the restraint of the bad: with one eye gazing on justice and the other on the road that would lead hither but does not. Law is divided, and subdivided until after the Divine Law, which itself is known by various names and divisions, and the laws of nature that enter into and control everything in creation, from the heavenly bodies about their sister planets to the tiniest seed and plant; then another step we reach the laws of society out of which grow the various divisions of civil law known separately as declaratory, remedial, penal, repeating, etc., the subject or science of which taken collectively makes jurisprudence, and this jurisprudence complete with the practice of medicine makes the medical jurisprudence which we are here to consider. This branch of medicine has more formidable phases to the young than any other, because the medical profession is a brotherhood full of ethics and kind feelings and not accustomed to that pertinent interrogatory and criticism that is so often tendered in irony and sarcasm from the learned bar.

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*Read before the North Carolina Medical Society June 8, 1897.

Medical jurisprudence would naturally suggest its consideration under two great heads viz: The laws now existing with their various deformities and the amendments required to entitle them to an equitable construction. Whatever may be the defects in the existing laws there is doubtless greater trouble arising from a want of a strict conformity to the demands of the same than from any defect in the language of the statutes themselves. Our statutes relating to the medical profession as a whole are possibly as good as could be expected, especially when we consider the short period that has elapsed since it was first suggested to the minds of the people at large that doctors needed no law whatever, except what came indirectly through the various channels that effected mankind at large. Our state board of health which should be the pride of our people, is doing a great work by the aid of its various auxiliaries. Also good marine and inland sanitary regulations, with a law regulating the practice of medicine, which if properly and rigidly enforced is possibly second to none; and much has been done by the way of legislation to prevent the spread of epidemics; in fact it may be we have had a plenty if not too much legislation; it is not an unintelligible mass of class legislation and still-born laws that we need but a few plain simple enactments that will bespeak the mental caliber of the age and people to the historian yet unborn. In the infancy of progressive civilization rules were laid down for the control of every petty detail, but as science advanced it brought with it a gradual emancipation of such flimsy, awkward customs and gave birth to two factions, which were known as strict constructionists and liberal constructionists, the one holding rigidly to the words, the other to the meaning. But the days of construction have now passed, so far as we are concerned, and our statute books groan and sigh over offspring that give notoriety to the grief stricken by an annual visit of the sheriff, who demands with the high hammer of the law another ten dollars from high, low, rich and poor; a legislative enactment as thoroughly destitute of prudence and charity in the true sense as can possibly be conceived. The medical profession of North Carolina does not pose as an organization pleading for charity, for it is the parent of a charity which has been defined as an unjust tax levied upon ability, energy and thrift by incompetence, indolence and shiftlessness; but this leech has come from a custom, and grown into an unwritten or common law from its birth being so remote that the memory of man runneth not to the contrary, but she simply asks that she may be left upon an equal footing with the various other arduous undertakings of life. The farmer has no special to pay, the teacher has no extras to fork over, the mechanic has no encumbrance, the nostrum vender no restrictions laid around him nor even the dude nor tramp are asked to apply the shoulder to the wheels of honest government and give a healthy momentum, still they have the full protection guaranteed by the constitution to every man, of life, liberty, property and to worship God according to the dictates of conscience; but the every day heroes of the world who have once paid for the privilege by satisfactory evidence to the law of a competency and who sacrifice time, means and even life for suffering humanity, must build colleges and support institutions, erect monuments and themselves go down unhonored beneath a burden of taxation.

As for the laws that demand correction, the unjust special tax on professional men should certainly be repealed. The State Treasurer's report shows for the year 1896 there was collected from the lawyers, doctors und dentists of N. C. $18,790, which amount, allowing seventy five cents on a hundred dollars worth of property, would be equal to the tax on $2,684,285, making an unjust burden upon the class of men who do more for the cause of humanity in proportion to their ability than any others. Roughly estimated there is about 1500 licensed physicians in North Carolina who probably paid their special tax amounting to $15,000; now supposing that this number of physicians do an amount of work that will make an average of $2,000 per capita it would make a grand total of $3,000,000 a year; of this allowing fifty per cent for loss and charity practice, (which is doubtless too large for our city brethren) it with the license tax still leaves $1,515,000 that the medical profession of North Carolina bears in excess of an honest advalorum. But possibly the gravest defect in the laws bearing on medical justice is a want of a statue stating or implying that in scientific investigations none except men com- mensurate with the depth of the investigation shall be allowed to sit in judgement on the case. This could not possibly be construed as an injustice to our neighbors and friends who other- wise would constitute the jury; in the first place the untutored mind cannot see as deep into a solid body as the educa- the waters ted, and in the second place the opinions that float on the face of are much more subject to be ensnared in the net of the wily pro- fessional than those of sufficient weight to root themselves inthe stable foundations.

I am not forgetful that any man on trial for a capital offense has a right to challenge a certain number of his countrymen who may be offered as jurors in the case pending,but yet this does not at all assure him that his destiny may not yet be entrusted to twelve men who can neither read nor write, and there are many men of this class who are much better judges of deep questions than some so-called scholars; yet we believe that there are cases in which nothing but scientific talent should be considered as competent jurors in the case. Take if you please the noted Maybrick case of Liverpool which was detailed in the NORTH CAROLINA MEDICAL JOURNAL,of February 5th,1897, and consider the evidence in the case in question ;first take a man of dissipated habits,in poor health addicted, to the use of arsenic and strychnia and other tonics, put him on horseback in a drenching rain and leave the April breezes to fan the saturated clothing dry, and what would you expect less than a chlll on the day following? That called a physician and later the second physisian, who enumerated among his symptoms vomiting, pain and burning in the stomach and bowels,thirst and great prostration ; and was medicated by his anxious advisers with the following drugs as medicines, viz: sulphonal, cocaine, bismuth (double doses) nitro glycerine, phosphoric acid, cascara, Plumber's pills (containing antimony and calomel)prussic acid,antipyrine,jaborandi, chlorine, morphine, Fowler's Solution of Arsenic, bismuth and opium supposatories; the combined ingenuity and skill of several physicians, and to the surprise of those present who are unacquainted with the case this man died the fifteenth day of his illness; and immediately after his death two brothers brought the charge of murder against his wife, claiming that death was caused by arsenic administered by her, which claim they failed to substantiate, but by chemical analysis Mr. Davis reported one fiftieth of a grain of arsenic found in the liver, nothing in the stomach or its contents and traces not weighable in the intestines. Upon this threadbare, flimsy tissue, braced by two brothers, bitter enemies, this poor woman was brought into open court, tried and convicted of the murder of her husband, who had himself ascribed the beginning of his illnsss to an over dose of strychnine which he had taken fifteen days previous to his death. Now had the jury in question been composed of the witnesses themselves instead of bakers, plumbers and laborers to whom the evidence was a mass of mystery and contradiction, the verdict would have been quite different.

Another much needed law is a statute regulating the manufacture and sale of nostrums. As it now stands, so far as I am aware, there is no tax on the thousand and one king cure alls sold at random and recommended with impunity all over our state, and indeed does this nostrum business afford such allurements that moonshiners have taken advantage of the opportunity and bottle their plutonian fire schorched nepenthe and label it in attractive type "Ginger Tonic" etc., a fraud upon the goverment and a slander upon the medical profession. Our legislature, in years past, thought it wise to enact a statue for the protection of agriculturists who might buy fertilizer for their cotton or tobacco and in keeping with said law require each brand of commercial guano to be analyzed and the formula published for the protection of the people against fraud. And not only this but our law requires the farmer shall be acquainted with the age of the seed that are offered to plant his farm or garden and as such require that the package shall bear the date of the growth of such seed. These are wise and commendable laws, but how careful are men sometimes to scrutinize about minor things and overlook major matters. What legislature has passed a law demanding that the thousand and one patent nostrums and proprietary humbugs shall have their formula printed and attached to the wrapper or box, or who has thought it wise and just while he is building his reputation as a lawmaker to suggest that the depraved minds and appetites and stomach be protected against the cunning of money sharks and thieves who, vampire like, live at the cost of the lives of their fellowmen.

It is a fact that men who never saw within the walls of a medical college, nor read the preface to a materia medica have put up teas and sold them under a guarantee: "No cure no pay." And our friends the druggists linger long, and tardily learn that they are not licened to practice medicine, but to compound the same; and not only druggists, but every cross-roads merchant has a fantastic array of blended colors showing that he too is an auxiliary to the quack, who gives him fifty per cent of all he can extort from the ignorance of his patronage, and recommneds his medicines as superior to the skill of the licensed physician in the community; also long as he correctly labels his articles and no one is sacrificed by his blunders he goes on unmolested.

There are several other subjects that should engage the attention of the law making powers, such as an institution for the care of the idiotic so as to control them and have them taught to work, so that they may not be a burden to the state, and cared for in a state of of celibacy, lest they transmit a like trouble and kindred afflictions to posterity; and this would doubtless save untold misery and affliction could a like application be made to that unfortunate class whose glands have been inoculated by the king of germs (syphilis). It is a subject of great importance that there should be a standard of qualification for the midwives that go to and fro all over the country, oftentimes not only practicing their art but passing as experimental practitioners and surgeons. In conclusion which the time now suggests proper, there is one point that surely should engage the mind of every medical man and that is forensic medicine proper. This is the crucial test by which a man is often measured, yet is not always an impartial judge; but the first thing in every case is to thoroughly acquaint one's self with the subject under consideration, and second is to tell what you know to be true and enough to satisfy the demand and no more. With these credentials no man need shudder because he is made an object of conspicuity, nor need he fear to meet the cross examination that so often contradicts the witness and completely riddles his entire testimony. But David Crocket's maxim: "Know you are right and go ahead" will anchor any young man safe in the harbor of success. It was the boast of Augustus that he found Rome of brick and left it of marble. But how much nobler will be the sovereign's boast, when he shall have it to say: That he found forensic medicine dear and left it cheap, found it a sealed book, left it a living letter; found it the patrimony of the rich, left it the inheritance of the poor; found it the two edged sword of craft and oppression, left it the staff of honesty and the shield of innocence.

AN ADDRESS ON MALARIAL FEVER.*

By WILLIAM SIDNEY THAYER, M. D., Associate Proffessor of Medicine in the Johns Hopkins University.

GENTLEMEN: In the few words I wish to speak tonight I shall endeavor to bring together some of the more important points which have been added to our knowledge concerning malarial fever since the discovery of the specific parasite sixteen years ago, and to emphasize their practical significance. I am aware that in Cleveland the disease is relatively rare, and yet its occasional occurrence and its interesting relations from a point of view of diagnosis with various other affections which are common with you here, as well as with us farther south, have suggested to me that a brief discussion of the subject might not be without interest.

Let us first consider the pathogenic agent. From time immemorial the prevalence of fevers in damp and marshy districts has been known. In old times, however, the malarial fevers were not sharply differentiated from various other febrile processes; in particular, typhus, typhoid, relapsing fevers and other septic infections. After the introduction of quinin, Torti, in 1712, differentiated a special class of fevers which yielded to treatment by this drug. These fevers, which occur especially in warm and tropical countries, and in damp, marshy regions, showed frequently an intermittent character, andto them the term "malaria" came to be applied.

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*Delivered before the Cleveland Medical Society.

It is very remarkable how early the infections nature of malaria was suspected. Varro (B. C. 118-29) says; "*Advertendum etiam si qua erunt loca palustria et propter eaudem causas, et quod arescunt, crescunt animalia quaedam minuta, quae non possunt oculi consequi, et per aera intus in corpus per os, ac nares perveniunt atque efficiunt difficiles morbos.*" Thus, we see that not only was the infectious nature of the process suspected, but further, the infectious agent was believed to be an animal parasite. These views were maintained in 1716 by Lancisi, and later by Rasori and a number of other Italian observers.

The general idea which was held concerning the manner of entrance of the infectious agent into the organism is reflected by the popular term which has since become definitely attached to the disease. The word "malaria" is nothing more than the Italian expression "*mal' aria*"—bad air. But these older ideas concerning the animate nature of the virus of malaria gave way gradually, especially during the early part of this century, to the theory that the parasite was of vegetable origin, this view having been especially put foward by Mitchell and Salisbury in this country.

In 1879 Klebs and Tommasi Crudelli described a bacillus which they believed to be the infectious agent of malaria. This they obtained from the earth in malarious districts. Their observations, though incomplete and soon disproven, gained considerable credence, so much so that fifteen years after the discovery of the true parasite one of the leading medical journals, published in the Engligh language, referred in an editorial to the opinion of these authors as settled facts.

In 1880 Laveran, a French army surgeon in Algiers, discovered in the blood of patients with malarial fever living organisms, which develope in the red blood-corpuscles of the affected individual, at the expense of which they grow dark pigment-granules. These organisms are readily demonstrable microscopically, either in the fresh blood or in dried and stained specimens.

From the universal presence of these parasites in the blood of patients with malarial fever, their immediate disappearance with recovery, either spontaneous or under treatment by quinin, Laveran believed himself justified in assuming that they represent the true pathogenic agent of the malady. Despite the opposition which the discovery of Laveran met with at first, you well know how universal has been its confirmation by all observers who have had opportunity to properly study the disease. The great value of this advance, apart from the light which it has thrown upon the general pathology of malarial fever, is readily appreciated when we consider that it has furnished us with a simple and certain method of diagnosis of the disease.

Now, though the discovery of the presence of a living animal parasite in the blood of all patients with malarial fever—a parasite which disappears with the recovery—is strong presumtive evidence of the intimate relation between the symptoms and the organism; yet we must acknowledge that only one of Koch's three postulates essential to determine the causal relation between the parasite and the disease has been fulfilled. For the absolute proof of this causal relation we need in addition.

(*a*) To obtain the organism in pure culture outside the body;

(*b*) To transfer the disease by inoculation from the pure culture into healthy individuals.

The cultivation of the parasite outside the body has never yet been accomplished, but we have in the blood of the infected individual, which is otherwise sterile, essentially an already prepared pure culture: and repeated experiments by Italian, Russian and German observers have shown that intravenous or hypodermic inoculation of the blood of an infected individual will always transfer the infection.

As has already been said, Laveran's discovery has been almost universally confirmed by all observers who have had opportunity to properly study the disease. And to our credit be it said that our countrymen have been among the foremost in continuing his work—Councilman and Abbott, Sternberg, Osler, James and Dock having early recognized the importance and value of the discovery.

After Laveran, the next great advance was made by Golgi, who, in 1885, studied the parasites observed in quartan and tertain fever, tracing all the steps in the life-history and reproduction, and noting the remarkable relation which exists between the devolopment of the parasites and the clinical manifestations of the fever. Further studies by Roman observers and also by Golgi of the more irregular and pernicious fevers occurring in the tropics, and during the later summer and fall in temperate climates, have led us to recognize today three main types of the fever, each of which is associated with a special type of the malarial parasite;

(1) *Tertian fever.*

(2) *Quartan fever.* These may be classed as the regular intermittent fever; they occur in temperate climates thoughout the malarial season, forming the only cases in the earlier part of the year.

(3) The more irregular fevers have been termed by the Italians the "*estivo-autumnal*" *fever.* This type of the disease occurs commonly in the tropics, but in temperate climates it is observed ouly during the height of the malarial season;that is, during the later summer and earlier fall.

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The Parasite of the Regularly Intermittent Fevers; the Tertian and Quartan Parasites.

We now know that in tertian and quartan fever the parasite exists in the blood in enormous groups,all the members of which are approximately at the same stage of development. The parasite constituting such a group enter the red corpuscles as small, clear, amœboid, hyalin bodies, which develop within the corpuscles, increasing in size and accumulating dark pigment-granules as a result of the destruction of the hemoglobin of the containing element. When the parasite is fully developed the pigment gathers into a single block or a clump of course granules, and the organism breaks up into a number of small, round hyalin bodies, each of which represents a fresh blood-corpuscle, and pursue again their cycle of development.

The length of the cycle of development of a group of tertian parasites lasts almost exactly 48 hours; so that, if one group be present in the blood, sporulation will occur every other day. On the other hand the cycle of existence of the quartan parasite lasts approximately 72 hours, sporulation occurring every fourth day.

Now the remarkable fact was discovered by Golgi that the malarial paroxysm is always associated with the sporulation of one of these groups of parasites. Thus, if one group of tertian parasites be present in the blood, sporulation will occur every other day, and with every period of sporulation there will occur a typical malarial paroxysm—*tertian intermittent fever.*

In infection with quartan organisms, whose cycle of existence is longer, lasting 72 hours, sporulation and the resulting paroxysm occur only every fourth day—*quartan intermittent fever.* Furthermore, it has been shown that, all things being equal, the severity of the manifestations of the infection depends largely upon the number of parasites actually found.

The mere existence of parasites in the blood is not sufficient to produce fever; they must reach by multiplication a certain sufficient size. Thus, ordinarily, a considerable period of incubation is required for the development of malarial fever, during which time a group of parasites is passing through its regular cycle and reaching over large proportions by its gradual multiplication. In experimental infections it requires usually about ten days or two weeks for the parasite inoculated to reach by multiplication a number sufficient to produce well marked manifestations.

Not infrequently more than one group of the tertian or quartan organism may be present, but more than two groups of the tertain or three of the quartan are extremely rare. In infections with two groups of the tertain organisms the parasites reach maturity, almost invaraibly, upon successive days; the result thus is *quotidian intermittent fever.* When two or three groups of the quartan organism are present, they also arrive at maturity usually on successive days, so that there follow either two days with intermittent paroxysms, followed by one day of complete intermission, or a quotidian fever due to three groups of the parasite.

The morphologic differences between the tertian and quartan parasites it is impossible to enter into at length in so short a time as is allotted to me tonight. You will observe upon the chart the main points of difference, which are well marked. The most important are the greater size of the tertain organism, its greater amœboid activity, the larger number, greater activity and smaller size of the pigment-granules; the fact that it breaks up into a larger number of spores than does the quartan organism, while the containing red cospuscle becomes gradually expanded and decolorized. The quartan parasite as you see is smaller; the granules are less motile, less numerous and coarser; the parasites break into a smaller number of segments, while the containing red corpuscles become rather contracted and deeper colored.

The Estivo-autumnal Parasite. The third variety of fever, the estivo-autumnal fever, is associated with the presence of organisms which possess distinct morphologic and biologic differences from those described above, the chief being their much smaller size. There are, however, certain other important biologic variations. They develop, for instance, largely in the internal organs, appearing in the peripheral circulation only during the earliest stages of their existence, when they are represented by small ameboid, non-pigmented, hyalin bodies. The larger forms, forms containing more than a few scattered granules of pigment, are relatively rare in the peripheral circulation; the segmenting bodies are only found in the blood of certain internal organs, especially the spleen, bone-marrow, brain and liver. I have seen segmenting bodies in the peripheral circulation but three times in this type of fever.

In this type of malaria there appear, also, after the infection has lasted about a week, larger pigmented crescentic or ovoid bodies, which do not apparently pursue the ordinary cycle of development, bodies which are very resistant to quinin. They represent probably sterile forms as long as they remain in the blood, though it cannot be denied that, as some maintain, they may be capable of further development outside the body.

A striking biologic feature of the estivo-autumnal parasite, or, as Dr. Welch has happily termed it, "*Hæmatozoon falciparum*," is the fact that the organisms are often accumulated in great numbers in certain special parts of the body. The special localizations of the parasite in various internal organs may give rise by the changes there produced to distinct clinical symptoms.

Another difference from the organisms of the regularly intermittent fevers is the fact that they are often present in multiple groups or sometimes in great numbers, apparently at almost all stages of development, so that the regular arrangement in groups is lost. In those cases in which distinct groups may be made out, the length of the cycle of existence appears to vary from 24 to 48 hours, or a little more.

Marchiafara and Bignama believe that they can distinguish morphologically and biologically two varieties of these parasites, one with a shorter and the other with a longer cycle, a view, however, which we have been unable to confirm.

The fevers with which these organisms are associated show, as one might expect, a much more irregular course than do the tertian and quartan fevers, and, not infrequently, there may be an irregularly remittent elevation of temperature.

In summary, then, we may say that we must now recognize:

(*a*) That malarial fever is due to infection with hemocytozoa, which develop within the red corpuscle;

(*b*) That three varieties, or more probably species, of these organisms are to be distinguished, each associated with a distinct type of fever—namely, the tertian, the quartan and the estivo-autumnal parasites;

(*c*) That these parasites, in the regularly intermittent fevers, are present in great groups, all the members of which are approximately at the same stage of development.

(*d*) That the same is often true of the estivo-autumnal parasite, though the tendency toward multiplication and the obliteration of sharply distinguishable groups is much more marked.

(*e*) That the malarial paroxysm occurs always in association with the sporulation of a group of parasites.

(*f*) That the severity of the symptoms in any given infection depends, to a great extent, upon the number of parasites present.

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We have seen that the causal relation of the parasites to malarial infections may be regarded as a settled fact. Let us now consider more intimately the manner in which the patasites bring about the clinical manifestations.

The Febrile Paroxysm.—The observations of Golgi which have been almost universally confirmed, show that the malarial paroxysm is always coincident with the sporulation of a group of parasites. The intermittent fever is thus easily account for by the remarkable arrangement of the parasites in groups sporulating at regular intervals, as has been already referred to. In infections with the estivo-autumnal parasites, in which the groups are so frequently multiple, or in which, indeed, this arrangement may be absent, the fever, as one might expect, is often irregular or continuous.

But why should the sporulation of a group of parasites be followed in fever?

Golgi first suggested that the fever was the result of the invasion of the red corpuscles by the fresh young spores arising at the time of segmentation.

But Antolisei, by a simple clinical observation, which may be confirmed at any time by the bedside, showed that this could not be the case. He called attention to the fact that if a large dose of quinin be given just before a malarial paroxysm, the segmentation of the ripe group of parasites will not be hindered, but the new organisms will all be destroyed before they enter fresh red blood-corpuscles; no fresh invasion of red elements takes place and the parasites disappear from the blood. The impending paroxysm occurs just the same, but no further symptoms follow. It cannot, then, be the invasion of fresh red corpuscles by the young parasites which is responsible for the paroxysm, but rather something which occurs at the time of sporulation.

Baccelli was the first to suggest, from analogy with other infectious processes, that the paroxysm is due to a circulating toxic substance set free by the parasites at the time of sporulation. This view, which seems most rational, has been accepted by most observers, and, indeed, there is much to support it.

Thut the chill and fever are produced by toxic substances in the circulation is strongly suggested for the following reasons:

1. Analogy with other infectious processes.
2. The fact that observations by Brousse, Roque and Lemoine, Botazzo and Pensuti have shown that there is a marked increase in the toxicity of the urine passed during and just following the malarial paroxysm.
3. The greatly increased toxicity of the sweat obtained during the malarial paroxysm as compared with that of normal individuals, as shown by the observations of Queirolo.

4. The strongest evidence, however, of the existence of a circulating toxic substance is found in the presence in the organs of patients dead of acute malarial infection of areas of disseminated focal necrosis, closely similar to those which occur in various other severe infectious diseases. These areas have been clearly shown by Flexner to be pathognomonic of a general toxemia.

We have thus practically conclusive evfdence of the existence of some toxic substance circulating in the blood. Is this a specific toxin set free by the hematozoa, or may it, perhaps, be the result of changes produced in the organs or tissues by the action of the parasites, such as, perhaps, the destruction of numerous red corpuscles, with the setting free of a considerable quantity of hemoglobin ?

Let us consider what happens at the time of the paroxysms. The paroxysm, as has been said, immediately follows and is intimately associated with the sporulation of a group of malarial parasites. There occur at this period:

1. The segmentation of a large number of full-grown parasites into fresh young organisms, while the pigment (and possibly some small quantity of the cytoplasm of the parasites) are left behind.

2. The liberation of a large number of full grown and segmenting organisms, while the including red corpuscles are disintegrated and destroyed, and the remains of these, together with a certain amount of hemoglobin which they yet contain, are left to be cared for in the circulation.

3. The escape from the red corpuscles of a considerable number of full-grown parasites which become degenerated and fragmented. These, with the remnants of the segmenting forms, are usually engulfed by phagocytes.

4. The rupture of a certain number of uninfected red corpuscles which set free their hemoglobin in the general circulation.

We might imagine that these toxic substances arising at the time of the paroxysm result from the destruction and disintegration of a large number of red blood-corpuscles; or that they are liberated by the parasites themselves at the time of sporulation, and possibly also by the fragmenting full-grown forms which are usually to be seen at this period; or we may imagine that both these factors play a part.

It may be that the destruction of a large number of red corpuscles exerts a toxic influence upon the organism. In other conditions, however, in which this occurs, it is difficult to separate the effect of the blood-destruction from that of the exciting cause, while extensive blood-destruction is by no means always associated with a sharp febrile paroxysm. Thus in poisoning by chlorate of potassium or carbon monoxid, when great numbers of red blood-corpuscles are destroyed, with consequent hemoglobinuria, fever may be practically absent.

There are, then, many reasons which might induce us to believe that Baccelli's supposition is true; that the toxic substance or substances responsible for the paroxysm are liberated by the sporulating parasites. The remains of the disintegrated red corpuscles may exert a toxic effect, but it is scarcely probable that they play the primary part in exciting the paroxysm.

The Anemia.—The discovery of the malarial parasite has enabled us easily to account for the anemia which is so characteristic of malarial infections. This depends not only upon the constant destruction of the red blood-corpuscles in the circulating blood, but in more chronic cases upon the extensive changes in the blood-forming organs which are brought about by the infection.

The jaundice also is a direct result of the extensive blood-destruction. It is not, strictly speaking, hematogenous. The remains of the destroyed red blood-corpuscles and the hemaglobin set free are disposed of ordinarily by the liver through the bile; the increased blood-destruction results in so extensive a polycholia that from the inspissation of the bile and the overcrowding of the bile capillaries, absorption of bile with jaundice occurs.

Pernicious Symptoms.—But among the most interesting results which have followed the recent studies of malarial infections have been the explanations which we have found for some of the pernicious symptoms which are especially common in estivo-autumnal infections. These symptoms have been shown to be in many instances directly due to the special localization of the parasites in certain internal organs.

Cerebral Symptoms.—The frequency of cerebral symptoms in pernicious malaria is well known. Often, probably, the delirium and other manifestations are due to circulating poisons, but in many cases with symptoms referable to disturbed brain functions, coma, general or local convulsions or paralyses, post-mortem examinations have clearly demonstrated their dependence upon local disturbances produced by the accumulation and development of enormous numbers of parasites in certain parts of the central nervous system. In many cases of fatal comatose malaria the capillaries of the grey cortex throughout may be crowded with parasites free and in red corpuscles. In some instances actual thromboses may occur, resulting in serious local changes. Sometimes definite local symptoms have been shown post-mortem to be due to changes resulting from the special accumulation of parasites in small areas of the brain or cord. Thus, in one instance of pernicious fever, with symptoms of bulbar paralysis, Marchiafava was able to demonstrate post-mortem a special localization of the parasites, with quite extensive secondary changes in the *medulla oblongata.* In like manner the well-known choleriform type of pernicious paroxysm has been shown to be due to the special localization of enormous numbers of parasites in the gastro-intestinal mucosa.

It may be that those instances of pernicious fever, which I have never had the opportunity to observe, but which have been well described by Baccelli in particular, those cases associated with marked pulmonary symptoms, are due to a special localization of the parasites in the capillaries of the lungs.

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Manner of Infection.—From what I have said it is easy to appreciate how deep an insight we have gained into the causes and nature of this important disease, and yet much remains to done. For instance, we have no idea as to the form in which the malarial parasite exists outside the human body, nor of the manner in which infection occurs. Owing to our ignorance of the former condition we are naturally more or less at sea in our attempts to elucidate the manner of infection. Does infection occur through the respired air, or through the gastro-intestinal tract? Or may it possibly be transmitted subcutaneously by means, perhaps, of insect bites?

You well know how general the idea is that malarial infection takes place by means of the inspired air. Indeed, there seems to be almost overwhelming evidence in favor of the view that infection may take place in this manner. And yet definite proof we do not possess.

In like manner many observers believe that malaria may be a water-borne disease. It must, however, be said that numerous attempts by Celli, Marino and Zeri to produce infection by the administration of water from the most malarious districts, by the mouth, by rectum and as an inhalation, have failed. Grassi and Feletti have furthermore caused patients to drink dew collected from malarial districts, and, indeed, fresh human blood containing malarial parasites, and in every instance with a wholly negative result.

The malaria may be transmitted by hypodermic or intravenous inoculation has been indisputably proved by a large number of carefully carried out experiments. And recently a considerable impetus has been given to the idea that malarial infection may be brought about by the bites of certain insects, especially the mosquito.

Laveran, Bignami and others have called attention to the fact that many of the precautions adopted in severely malarious districts against infection are just such as might be directed against the bites of insects, and especially mosquitoes. The discovery of Theobald Smith that the hemocytozoon (*pyrosoma bigeminum*) of Texas cattle fever is conveyed from one animal to another by means of the cattle-tick, and that of Bruce, that the cause of the tsetse-disease is an hemocytozoon which is introduced by bite of the insect, are certainly suggestive, relating, as they do, to parasites so closely allied to the malarial organism.

The theory recently put forward by Manson, who suggests that the mosquito may represent an intermediate host of the malarial parasite, playing the same rôle that it does in the case *filaria sanguinis hominis*, is very interesting but purely hypothetical. Much of this idea Manson bases upon the discovery that flagellate bodies may develop from crescentic forms within the stomach of the mosquito; but this fact, though very interesting, is not remarkable, when we consider that they develop outside of the body upon the fresh slides of blood. That malarial infection may take place through the bites of insects is an interesting possibility, but it is by no means proven.

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Now, what practical results have we gained from these interesting advances of the last fifteen years? The most important, certainly, is the establishment of a positive diagnostic criterion; but further, as a direct result of this, we have learned much that is important with regard to the methods and effects of treatment.

AETIOLOGY OF GLAUCOMA.—Dr. Dudley S. Reynolds discusses this subject in the *Tri-State Medical Journal.* He sums up his observations with the statement that glaucoma is always an inflammation of the ciliary muscle, or ciliary body, generally of both. That the iris always participates more or less in the inflammation; and that the peripheral portion of the choroid is early invaded. The only predispositions known are the rheumatic and gouty diatheses. A common exciting cause, independently of the diathetic conditions, is traumatism of the ciliary region.

Astigmatism, hypermetropia, and the prolonged use of the eyes by students and artisans, poorly nourished, may lead to incipient or chronic glaucoma. The prolonged use of the eyes in the presence of glaring light, with loss of sleep, may in some lead to augmented tension and peripheral narrowing of the field of vision. All the well-defined typical cases of glaucoma must, however, be admitted to occur in persons with rheumatic or gouty diatheses, or in those who have been the subject of traumatism of the ciliary region of the eye.

The ocular tension observed in syphilitic irido-cyclitis, extending, in neglected cases, to the choroid, retina, and vitreous, sometimes ignorantly called iritis serosa, presents in no stage of its development any clinical resemblance to true glaucoma.

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Editorial.

PUBLIC HOSPITALS AND DISPENSARIES.

There are two sides to the question of dispensing free medical aid to the poor. The great cities of the north and west are realizing that this kind of charity can be carried to an extreme that is got good, while the greater part of the South is experiencing medical the other extreme. Either of these extremes affects the profession and is a matter in which its members should take a special interest. The trouble in the north is that with the great multiplicity of free hospitals and dispensaries the legitimate fields of the regular practitioner are being invaded and his income thereby reduced.

The number of these institutions seems to depend not so much upon the real needs of the people as upon the number of schools which need "material" for the clinical instruction of their students. This is clearly shown by the fact that the greatest complaint comes from those cities where the schools are most numerous. Ambitious young medical men see that it greatly increases a physician's reputation and brings him more frequently and prominently before the eye of the public, in other words, that it is the best kind of an advertisement to have the title "Professor" prefixed to his name, and if he has not the "pull" that will secure a place in one of the schools already existing, he gets together a set of those who are out and they set up another "much-needed" school. A school without clinical material is "not in it," so they must needs get a dispensary and hospital under their control. The great need of such an institution in a certain locality is brought to the attention of the municipal authorities pecuniary aid secured, and the dispensary established. The supply of those patients for whom such institutions are properly intended is not sufficient for the needs of the school, so those are admitted who are able to, and should, pay for the services of their medical attendant. This is unjust to the tax-payers, unjust to those physicians who depend upon their practice for their support, and harmful to the people at large, in that it stimulates a spirit of pauperism. However, it is a difficult matter to decide just where the line should be drawn that shall divide the two classes. We do not think that this aid should be extended only to those who are destitute. There is a worthy and most useful class of citizens, who by their honesty, frugality and industry manage to keep out of debt and supply their families with the ordinary comforts of life while they are in health, but who in case of sickness, have their income cut off as well as their expenses increased. This class should be favored and not required to start out again burdened with a heavy debt and in many cases out of a job which has been forfeited during their illness. Such a condition would greatly discourage them and in many instances would probably prove the beginning of a downward tendency that would finally result in absolute poverty and crime.

While the north is suffering from an exess of this kind of charity this section is suffering the other extreme. In only three or four of the larger towns is there any effort being made to dispense medical aid to the poor from the public funds. This burden is thrown entirely upon the medical profession as though it were a part of their natural duty, and we may say accepted by them in much the same spirit. Now there is no more reason that the medical profession should bear this burden alone than that it should be imposed upon the legal profession, or any other individual class. Doctors have to pay their pro rata of the public tax, and are now even subjected to a special tax for the privilege of practicing; they have to pay full price for all the commodities of life and for the drugs which they are expected to furnish when they give their services.

The care of the poor clearly devolves upon the county authorities and each county should provide hospital accommodation for those of its citizens who are sick and unable to pay for their medical attention. If a county is sufficiently populous it should have its own hospital centrally located; otherwise, two or three counties might have a joint hospital. These hospitals need not be expensive structures, but should be provided with the necessary paraphernalia, and be under fhe charge of some intelligent person. Some physician near by, could always be engaged for a nominal sum to visit the hospital every day, or two days, at farthest,and give his directions to the attendant. The expense of such an institution would not be great and would fall very lightly upon the individual tax-payers, whereas the burden falls quite heavily when concentrated upon the twenty-five or thirty doctors in the county. These institutions should be in no wise connected with the county poor houses, for there is a stigma attached to the fact that one has been an inmate of the poor house which would deter many of the very persons who most deserve the aid.

Some people think that it is no expense for a doctor to attend the poor, but it is an expense. He is not only called upon in many instances to furnish medicines and surgical dressings, but there is the wear and tear on his horse and buggy and upon himself, and the frequent loss of a case that would pay him well; and the intelligent physician is always able to employ his spare time usefully. We believe this is a matter worthy of the attention of the county medical societies,and we see no reason why something on this line cannot be done that will prove greatly beneficial to the people as well as to the profession.

Abstracts.

THE CLINICAL SIGNIFICANCE OF THE DISCHARGES IN INFANTILE DIARRHEA.—Dr. W. E. Darnall (*Prac. Med.*) suggests the following classification of the bowel discharges in infantile diarrhœa: Mucous, serous, the pasty white, or musty, and the dyspeptic, the last subdivided into (1) acid and (2) alkaline.

(*a*) The mucous stool, whose appearance is familiar to every practitioner, presents a discharge usually small in amount, frequent, and characterized by whitish, ropy mucus of a gelatinous consistence. It may be faintly streaked with blood or stained with feces. While some authors have attributed the presence of this stool entirely to nervous disturbance of the secretive functions, it is equally true that this stool in a large number of cases is the result of errors in diet, and where no neurotic tendency can be made out.

In dysenteric states, where the colon is affected, there may be quite a bloody stool, and sometimes a stool known as hemorrhagic, which consists almost entirely of blood. There are also much tormina and tenesmus, and the pain rapidly exhausts the little patient if it is not relieved.

Should ulceration be present, it may be determined by the occurrence in the discharges of pus and shreds of necrosed mucous membrane, in addition to blood and mucus.

If the disturbance is neurotic in origin, with mucous stools, remedies designed to restore normal nervous tone may be employed, good hygiene being of first importance in all cases. If the history points to the presence of local irritants from dietary imprudence, a full dose of a palatable preparation of castor oil sweeps clean the Augean stable of its offending matters and mucus. Bismuth then in large doses, held in suspension with mucilage of acacia, is valuable for its sedative, mildly astringent, and antiseptic action.

Should a dysenteric state be present, calomel and ipecac, internally, are of value. The more rational mode of treatment, however, would seem to be that of local applicatious to the diseased part by means of medicated enemata—silver nitrate solutions standing among the most valuable for this purpose. It is also among the best when ulceration is present.

(*b*) *Serous Diarrhea.*—These stools are represented by copious watery discharges, which hardly stain the napkin. It is termed choleriform diarrhea, or cholera infantum. Associated with such stools may be severe vomiting, and usually a profound state of collapse. The severe shock under which the little patient labors is ascribed, on the one hand, to heat exhaustion; on the other, to a severe toxemia from infected food. The clinical picture in either case is the same. The vaso-motor system is profoundly depressed, and the abundant flow appears to be caused by the relaxation of the intestinal vessels supplied by the splanchnic nerves. Temporizing here means death to the child. If heat stroke is the cause, the same indications for treatment obtain as in the adult. Whether due to heat or poison, the point to be emphasized is that a dangerous condition confronts us—a disorganized physiologic state is present. Unless this aspect of the case is recognized and the depressed state of the nervous system promptly restored to its normal tone, a few hours or a day may leak the reservoir of life so low that death sepervenes.

Abdominal counter-irritation is valuable and should not be forgotten. Morphin and atropin, for their stimulating effect, may be used hypodermatically in minute doses. Champagne and brandy are valuable. Lavage of the stomach may be employed to check vomiting. Rectal enemata of saline solutions also have their advantage, for by this means lost serum may be restored to the blood, while excessive purging may be allayed by rectal injections of starch water and laudanum.

(*c*) *The Pasty White or Musty Stool.*—The discharge is hardly visible on the napkin, and has the appearance of a paste made of water and chalk. The odor is musty or mousy, and is characteristic of this stool. The stool indicates a complete atony of the glands of digestion. Through the influence of micro-organisms every gland in the alimentary canal appears to be inactive.

Treatment here should be prompt, its object being to restore activity to the glandular functions. No agent is more effective for accomplishing this than the bile itself, for this, with its antiseptic action, is one of its most important natural functions. Podophyllin in one-twentieth-grain doses has been found very valuable in flooding the bowel with bile and bringing to terms the languid glands. So long as this pasty stool continues astringents are contraindicated. They will only lock every gland tighter and tighter. When the stools become bilious, Nature usually accomplishes the rest. If a catarrhal condition should remain, however, then, and not till then, are astringents indicated.

In each of these three phases of diarrhea it is generally accepted as advisable to withhold all food for a short time. In the meantime thirst may be allayed by barley water, and the child usually does not suffer from want of nourishment for a day or two.

(*d*) In the next class of *dyspeptic* diarrhea, however, the whole management seems to be a question of artificial feeding rather than the administration of medicine. The trouble may last for months unless proper feeding be employed.

The stools may be divided into two varieties: The first of these is characterized by a discharge leaden in color, acid in reaction, and by the sour, disagreeable odor of fermentation. The second is characterized by a grass-green stool, alkaline in reaction, and of a most foul and offensive odor. Intermixed in the discharges of both the acid leaden and the alkaline green stools may be seen curds of undigested food. The first is typical of the bacteria of fermentation; the second of the bacteria of decomposition, and the alimentary canal affords a splendid test tube for the cultivation of these organisms.

This disease is one of hot weather, the warmer temperature making the always easily infected milk still more congenial to the growth of the bacteria, which get into it through unclean nursing bottles, contaminated nipples, and in many other ways.

The first indication is, of course, to free the bowel as completely as possible of its offending contents. The adjustment of a suitable diet may then be considered. This is frequently a matter of much difficulty. Escherich, who has made much research in this field, advises, in the acid-fermented stool, the withdrawal of all carbohydrate foods, milk, etc., and the administration of beef juice, albumin water, and meat broths. If, on the other hand, the green alkaline stool is present, these foods should be prohibited, and carbohydrates given. It is often necessary, however, to exclude either one or the other class entirely, or practically so, from the diet in order to succeed. It is hard to find a food product which will do this.

Milk is admittedly the most perfect food for infants. It is Nature's own product for that purpose. When, however, the little one's digestion becomes so impaired that even Nature's food offends, the fact that the offending constituent of the milk, whatever it may be, can be reduced to a minimum by an artificial process marks an advance in the subject of infant feeding. By this means Nature may be made to fit the individual instead of individual conformity to Nature.

It is a matter of vital importance in these diarrheas that the difference between them be clearly drawn, and that an accurate conception of the condition present in each be gained. Routine or random perscriptions here will not do. Whether the stool is mucous, serous, pasty white, or dyspeptic, unless the physiologic aspect of each case is considered in connection with the the causes, we are working in the dark. It is necessary for the attendant to have clearly in his mind what he wishes to do and why he wishes to do it, if he would succeed in the accomplishment of his purpose.—*Medical and Surgical Reporter.*

Circumscribed Meningitis—Dr. Wolf records a case of meningitis complicating ear disease, and due to pneumococcus. An intradural abscess was opened during life. At the necropsy there was an old thrombus in the traverse sinus, and a pial vein opening into it was blocked, produced a localized cerebral softening. There was a localized suppurative pachmeningitis and leptomeningitis in the neighborhood, a chronic otitis media and pneumonia. A complete bacteriological examination showed that the disease was caused by the pneumococcus. The point of entry was the ear. The limitation of the meningitis was due to the diminished virulence of the pneumococcus. Among 174 published cases of meningitis, there was only one with a circumscribed meningitis and encephalitis due to the pneumococcus. In sixty cases the diplococcus intracellularis was found. According to Jæger this meningococcus is the cause of genuine cerebro-spinal meningitis. The author distinguished carefully between the pneumococcus in his case and the meningococcus.

The latter is non-pathogenic to mice. He thinks that the pneumococcus and meningococcus are the chief producers of cerebrospinal meningitis, and that other micro-organisms, especially the pyogenic cocci, play the causative part in only a few cases. In circumscribed meningitis the pneumococcus has up to the present alone been found. A general infection by way of the blood must be distinguished from a local infection arising from some region in the neighborhood of the skull. One of the most frequent modes of infection is that the micro-organisms gain access from the naso-pharynx through the Eustachian tube into the middle ear, and thence into the cranial cavity. The author thinks that in a large majority of cases of metapneumonic meningitis the pneumococcus gains access by this route, and only in a few cases by way of the blood.—*Berl klin. Woch.*—*Pacific Medical Journal.*

SARCOMA FROM AN IRRITATED MOLE.—Grant mentions in the *Intercolonial Med. Jour. of Australasia*, May 20, 1897, an instance of sarcoma developing from a mole as a result of a thrice-repeated injury. The patient, a healthy man of twenty-seven, had had a black mole on his right arm since birth. At the age of twenty-four it was torn by the horn of a sheep, but healed rapidly. A little later it was again injured, and increased to the size of the finger tip. After a third bruise, received eighteen months after the first injury, it was still larger, and several secondary spots had appeared in the vicinity. All of these growths were excised. There was no local recurrence, but six months later a lump was removed from the right axilla. Within six months from the removal of this nodule the skin of the arms and trunk was studded with melanotic nodules of various sizes and at different depths, and there was only the outlook of a speedy death.—*Medical Progress.*

DURATION OF WHOOPING-COUGH INFECTION.—Dr. Weill expressed the opinion three years ago that whooping-cough is contagious only during the catarrhal stage; and has since put his opinion to severe tests. On various occasions he permitted nearly 100 young children, who had not previously suffered from whooping-cough, to be associated in the same ward for twenty days or more with children suffering from the disease during the stage of whooping. In only one case was the disease contracted, and in this instance the patient from whom the infection was derived was in the very earliest period of the whooping stage. In three small epidemics Weill was able to satisfy himself that infection was contracted from children who had not yet begun to whoop. He concludes that infection ceases very soon after the characteristic whoop commences, and that therefore in a family it is not the patient who is already whooping, but his brothers and sisters who have not previously had whooping-cough who ought to be isolated.—*Lyon Méd.*—*Pacific Medical Journal.*

DISINFECTION OF TYPHOID EXCRETA.—Dr. W. Gilman Thompson (*Albany Medical Annals*, April 1897) concludes as follows: 1. The best disinfectants of typhoid stools for practical use are: (*a*) 1 to 500 acidulated solution of corrosive sublimate; (*b*) 1 to 10 crude carbolic-acid solution; (*c*) chlorinated lime. 2. Owing to the possibility of injury to plumbing, the carbolic-acid solution is preferable whenever plumbing is concerned. The lime is best for country use in privies and trenches. 3. The disinfectant should be thoroughly mixed with the stool and left in contact with it fully two hours. Enough of the disinfectant must be added to cover completely the stool with the solution. 4. The bed pan should be kept ready filled at all times with at least a a pint of the disinfectant, into which the stool is at once discharged, and should be cleaned with scalding water and one of the disinfecting solutions. 5. Rectal thermometers, syringes, tubes, and all utensils coming in contact with any of the fæcal matter must be disinfected with the corrosive-sublimate or carbolic-acid solution. 6. After each stool the patient's perineum and adjacent parts should be washed and sponged with a 1 to 2,000 corrosive-sublimate solution. 7. Nurses and attendants should be cautioned to wash their own hands thoroughly and immerse them in a 1 to 1,000 corrosive-sublimate solution, after handling the bedpan, thermometer, syringe, or patient, or giving sponge or tub baths. 8. All linen and bedclothing used by the patient should be soaked in a 1 to 20 carbolic-acid solution and boiled for fully two hours. 9. Disinfection of the stools should be begun as soon as the diagnosis of enteric fever is established and should be continued for ten days after the temperature has remained at the normal. 10. In localities where a proper drainage system is lacking, the stools should either be mixed with sawdust and cremated, or buried in a trench four feet deep after being covered with chloride of lime.—*Med. Record.*

A NEW INCISION FOR EXPOSING THE BILLIARY PASSAGES.—A. D. Bevan (*Journal of the American Medical Association*, June 26, 1897, p. 1225) publishes an account of a new incision for exposing the bile-tract: The primary part, which can be employed for exploration or simple cholecystotomy, is an incision, shaped like an italic *f*, along or through the outer border of the rectus muscle. This may be made from three to four inches in length. The extended parts of the incision are added to this when required. These extended portions can be made from an inch to three inches in length as the thickness of the abdominal wall and the character of the operation demand. When complete, the incision furnishes much freer access to the gall-bladder and bile-ducts than can be obtained by any other form of incision. The edges of the incision are readily held apart without tension, and the entire bile-tract is freely exposed for examination and operative procedures.—*Progress of Medical Science.*

DIAGNOSIS OF PERICARDITIS.—Dr. F. C. Shattuck contributes (*Boston Medical and Surgical Journal*, July 8, 1897) a valuable article giving the results of his experience with pericarditis. This article is much more than a repetition of the text-book assertions concerning pericarditis. Several points that are new are clearly brought out, and it is illustrated by instructive figures.

There is no disease that is more frequently overlooked during life than pericarditis. The reasons for this are that pericarditis is commonly secondary, that frequently co-existing endocarditis confuses the physical signs, that rheumatism, the common primary cause, is, especially in children, often so slight as to pass unnoticed and for this reason to cause the heart to escape without examination. Tuberculosis, which may be a cause of pericarditis, is so seldom the primary disease that the physician, in tubercular patients, neglects the systematic examination for pericardial involvement. The symptoms, too, are not to be relied upon as suggestive of pericarditis or in any way distinctively diagnostic. Pain may be slight or absent; there is nothing, ordinarily, about the facies, position, breathing, pulse or temperature characteristic of inflammation of pericardium. Diagnosis, therefore, must rest almost exclusively upon physical signs, and these may be absent or very perplexing.

Among the practical points brought out which differ somewhat from commonly accepted views is the fact that the shape of the dulness produced by the effusion is not commonly pear-shaped or pyradmidal; it is simply that of the area of dulness of the normal heart equally extended in all directions. He has never been able to make out any percussion changes in the back that he could connect with a distended pericardial sac, though in several instances he has been able to make out dulness below the left clavicle. The impulse of the heart is not always invisible but may be both visible and palpable.

Of great importance in diagnosis is the fact that the apex-impulse is within the area of dulness. Paradoxical pulse he noted in five out of eight cases. Sudden collapse was frequently noted and is a sign of diagnostic importance.

The frequency with which Dr. Shattuck has met with pericarditis in cases of pneumonia is worth recording. Of fifty-seven cases of pneumonia under his care in the hospital during the past three years, twenty came to autopsy. In thirteen pericarditis was found; in five of the thirteen it was detected during life. In the other eight it was carefully sought for, and the absence of its signs recorded. This is a striking proof of the frequency of its occurrence during pneumonia as well as of the extreme difficulty of recognizing the affection.

Dr. Shattuck believes in early tapping. He says: "I have never regretted having tapped; I have reproached myself for not having tapped." He can lay down no hard and fast rule as to when to aspirate; each case must be determined on its merits. He has tried various points at which to make the puncture. He is inclined to speak favorably of the left costo-xiphoid angle, the instrument being thrust upward and backward. Here he punctured once only and then after death, but the ease with which a pint of fluid was withdrawn inclines him to think that he should try this point again during life when occasion offers. —*Progress of Medical Science.*

Therapeutic Hints.

FOR ASTHMA.—

℞—Ext. bellad.	gr. iv.
Sat. sol. potass. iod. . . .	ʒ ijss.
Chloroform	ʒ ijss.
Fld. ext. valerian	℥ j.
Mucil. acaciæ . . . q.s.ad.	℥ vj.

M. Sig.—Shake well before using and take a teaspoonful in a wineglassful of water half an hour before meals and at bedtime.

AN APPLICATION FOR URTICARIA.—Gaucher (cited in the Nazette Hebdomadaire de Medecine et de Chirungie for July 11) recommends this:

℞—Menthol	1 part.
Chloroform,	
Ether,	
Spirit of camphor, .	aa 3 parts.

M. To be used as a spray or as a lotion. The parts should then be dusted with powdered starch or zinc oxide.

FOR CHRONIC CONSTIPATION:—(Kelsey.)

℞—Tr. nux vom . . .	c	5 (gtt. 8)
Tr. belladonnæ . .	10	(ʒ iiss.)
Inf. sennæ	20	(ʒ v.)
Inf. columbæ . . .	34	(ʒ viiss.)

M. Sig. A teaspoonful before meals.

If the motions are drier than normal a saline may be given at mealtime in addition to the above.—*S. W. M. and S. Reporter.*

FOR THE FIRST STAGE OF BRONCHITIS.—

℞—Potassii citratis	℥ ss
Apomorphiæ hypochlor. . .	gr. i
Syr. ipecac.	℥ ss
Suc. limonis	℥ ii
Syr. simplicis, q. s. ad. . .	℥ iv.

M. Sig. Dessertspoonful in water every three hours.—*Med. News.*

Benzoate of Soda in the Treatment of Grippe.—No drug has given more favorable results in the treatment of *grippe* than benzoate of soda. It may be given in capsule or powder form, the usual dose being ten grains three or four times a day. When muscular symptoms are pronounced, the following combination acts admirably:

℞—Sodii benzoas	ʒ ii
Salol	ʒ i
Phenacetin	gr.xxxvi.

M., and ft. chart No. xii. Sig. One powder every four hours. —*Med. News.*

Stitch in the Side.—Salberg has found that the stitch in the side in cases of pneumonia can be greatly relieved by the application of adhesive plaster.

Retained Placenta.—In his instructions on the subject of *retained placenta and beginning puerperal sepsis*, Dr. Wells points out the danger of using a sharp curet for the removal of pieces of placental tissue. A septic uterus is always soft, and its perforation by a curet an easy matter. Unless the operator has had experience in the use of the curet, it is better to use the carefully sterilized finger to remove any fragments which may adhere to the uterine wall, and follow this by copious interuterine injection of creolin. When the os is not sufficiently dilated to admit the finger, it should be enlarged by graduated dilators on the Barnes bag.—*Phil. Polyclinic.*

Miscellaneous Items.

Dr. Thayer's interesting and instructive address on Malarial Fever will be concluded in the next issue of the JOURNAL.

The increasing business of Mess. Bartlett Garvens & Co., the leading southern instrument dealers has rendered necessary a move into more commodions quarters. They should be addresed hereafter at No. 30 No. Ninth St., Richmond Va.

The habit of exchanging chewing gum is said to be frequently the cause of spreading contagious diseases among school children

If you need some easily digested and nourishing food for your convalescent patients and dyspeptics, write the George A. Hill, Co., of Alexandria, Va., for a sample of Pepton Beef and Bread Biscuits.

The Price-Nash-McGuire Prize, of $450 offered for the best "History of Medicine and Surgery in Virginia" was awarded at the recent meeting of the Medical Society of Virginia to Dr. Author Jordan, of Richmond. A committee was appointed to prepare from this essay and others that were presented a "History of Medicine and Surgery in Virginia," and $100 was voted from the funds of the Society to meet the expenses of this committee.

REWARD FOR PATRIOTISM (?). Recently a steamship company on the Lakes offered a reward of $100 to any child born on a steamer of their Line, and $500 to any pair of twins. Now a Brooklyn landlord comes to the front with the offer of a house and lot rent free to the first family among his tenants to whom twins are born. To the first family to whom triplets are born he will present a house and lot. That young woman of St. Louis, who is just eighteen and had four sets of twins should move to Brooklyn.

YELLOW FEVER OUTBREAK.—At the time the JOURNAL goes to press the outbreak of yellow fever on the Gulf coast is assuming very serious proportions. For several weeks there was prevailing at Ocean Springs, a summer watering place, a fever of a suspicious character. An investigation was held by the Health authorities who decided the disease to be dengue fever. The mortality had been very low, but as it began to increase another conference was held and the disease pronounced yellow fever. In the meantime visitors at Ocean Springs had returned to their homes in different parts of the country, with the result that cases of fever have been springing up in widely separated parts of the State of Mississippi and Louisiana. The State Boards of Health and the Marine Hospital Service have united forces and doing all they can to restrict the spread of the disease. The usual shot-gun quarantines have been established by the small towns and the cities on the South Atlantic coast have established quarantine against all the fever district. The city of Atlanta has opened her gates to the refugees and invited them to come in. This will probably result in a quarantine against Atlanta, for while the altitude of that city may prevent the spread of the disease on the spot, the germs may be carried from Atlanta to coast cities where the fever would develop.

DELIRIUM TREMENS DUE TO PARALDEHYDE—Reinhold (*Therap. Monat.*) relates the case of a patient, forty-one years old, who was addicted to taking paraldehyde, and had taken as much as two ounces in the twenty-four hours preceding his admission. He was very much depressed, his speech was labored, and there was decided tremor of the tongue and hands. On his being deprived of paraldehyde, epileptoid attacks occurred. Wine, diuretics, bromides, and lukewarm baths were prescribed. There were transitory periods of agitation with delusions of persecution and visual illusions. Reinhold advises against the free use of alcohol and bromides in such cases and says that, if they are not employed, the epileptoid seizures may perhaps be avoided altogether. Sleep is to be procured by means of sodium bromide and trional. The diet should be generous, the bowels carefully regulated, and metabolism promoted by hydriatic measures. The patient should not be dismissed until his sleep is normal.—*N. Y. Med. Jour.*

THE TURKISH SOLDIERS AS EXAMPLES OF TOTAL ABSTINENCE AND VEGETARIANISM.—That the Turkish peasantry are, as a rule, abstemious, eating little meat, drinking no alcohol, and that the same, or an even more rigid regimen, is continued when they become soldiers, are well-known facts. That a vegetarian diet prevents ferocity is, therefore, not born out by this wholesale illustration, for there are no more fierce or more tenacious warriors in the world. It is true that the Turks are not quarrelsome, but in war they are tireless fighters. On the other hand their endurance, their persistence, their ability to take long marches without food, and to fight without food or rest, as well as the extraordinary recuperative force shown by their wounded seem to be attested by all observers, and the conclusisn that neither animal food nor alcohol is necessary to the highest health of human beings, seems justifiable.—*Phil Polyclinic.*

NECROLOGY.

Dr. R. M. Pulliam, aged 66 years, at Richmond, Va., September 5, 1897.

Dr. John H. Bemiss, aged 42 years, of yellow fever, at New Orleans, September 5, 1897.

Dr. Geo. Ben. Johnston, aged 74 years,at Alexandria, Va., September 13, 1897. Dr. Johnston was a native of North Carolina. Presided last year at the Pan American Congress, in the City of Mexico and at the recent meeting of the Medical Society of Virginia. He was one of the most prominent of southern medical men.

Dr. John Braxton Hicks, aged 72 years, in London, August 28, 1897. He was one of the pioneers of British work in midwifery and diseases of women, and was for many years obstetric Physician to Guy's Hospital.

Reading Notices.

BUFFALO LITHIA WATER SOLVENT OF URINARY CALCULI.—That the free use of Buffalo Lithia Water is a most valuable agent in the therapeutics of the lithæmic or uric acid and the gouty diatheses scarcely needs additional confirmation. The recorded experience of Drs. Hunter McGuire, Allard Memminger, H. C. Wood, J. Herbert Claiborne, John T. Metcalf, John H. Tucker, Alex. B. Mott, John V. Shoemaker, Chas. B. Nancrede, Cyrus Edson, Lewis D. Mason and hosts of other eminent clinicians attest this. But the claim that this Water is a *solvent of urinary concretions or calculi* in the kidney and bladder—that it disintegrates and washes them out of the bladder—seemed too enthusiastic for some to accept. This claim was put to the surest of practical tests last winter, when fragments of calculi passed by patients who had for some time been taking Buffalo Lithia Water, were subjected to analysis by three of the most able and distinguished chemists of the world. Dr. A. Gabriel Pouchet, Professor of Pharmacology and Materia Medica, Faculty of Medicine of Paris, etc., advises the use of the water of Spring No. 2, to disintegrate and eliminate vescial or renal calculi; and in a recent pamphlet on Buffalo Lithia Springs, he presents eight illustrations from photographs of disintegrated calculi passed by as many patients while under the influence of the Water. Dr. R. Ogden Doremus, Professor of Chemistry in Bellevue Hospital Medical College, New York, photographs some fragments of calculi disintegrated and eliminated by the use of Buffalo Lithia Water, Spring No. 2. Dr. John Attfield, F. I. C., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, and the distinguished author of the *Manual on Chemistry*, used generally as the text book in academic and foreign countries, likewise by his analysis of five specimens shows that the calculi were disintegrated and eliminated "by patients drinking the waters." In addition, every day professional and clinical observation confirms the facts named. These Waters have now been prominently before the profession for forty years or more. Were they unable to meet the claims made for them, their use by prescription would long since have been discontinued. This is too practical an age to perpetuate the use of agents that have been tried and found wanting. But the demand for Buffalo Lithia Water, for the purposes named—especially that of Spring No. 2.—has steadily increased, until now, nearly the full supply from the Springs is daily consumed. It is the great value of Buffalo Lithia Water in the conditions referred to that has caused the opening up of springs and wells in all parts of the country trying in vain to attain a comparable record.

We call the attention of our readers to the advertisement of the Robinson-Pettet Co., Louisville, Ky., which will be found on another page of this issue. This house was established fifty years ago, and enjoys a widespread reputation as manufactures of high character. We do not hesitate to endorse their preparations as being all they claim.

DOCTOR:—Your library is not complete without the Hypnotic Magazine. Cost of this handsome monthly, including premium book on Suggestive Therapeutics is only one dollar ($1.00) a year.

THE PSYCHIC PUBLISHING CO.,
56 5th Avenue, Chicago.

BUFFALO LITHIA WATER

Disintegrates and breaks down Urinary Calculi, both the Uric Acid and Phosphatic Formation, and other Varieties as well.

ANALYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

NEW YORK, December 3, 1896.

Dr. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

Dear Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection containing a number of fragments, and also the three boxes, each containing a single Calculus, mentioned in your letter as discharged by different patients while under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of each specimen, and designated them alphabetically.

One of Calculi from collection marked "A" was 9/16 of an inch in diameter, of an orange color, and on section exhibited a nucleus surrounded by nine concentric layers of a crystalline structure. On chemical analysis it was found to consist of **Uric Acid** (colored by organic substances from the urine), with traces of Ammonium Urate and Calcium Oxolate. A fragment of a broken down Calculus from the same collection was found to consist of **Uric Acid.**

One of the fragments taken at random from the collection marked "B" which was still more disintegrated than the preceding one, proved on analysis to be composed chiefly of **Uric Acid** and Ammonium Urate, with a trace of Calcium Oxolate.

The contents of the boxes marked "C" consisted chiefly of whitish Crystalline materials. On microscopic examination they exhibited well defined and prismatic crystals, characteristic of "Triple Phosphate." On chemical analysis they were found to consist of Magnesium and Ammonium Phosphate (triple phosphate), Calcium Phosphate, Calcium Carbonate a trace, Sodium and Potossium Salts in traces, Uric Acid and Urates none, Calcium Oxolate none, Organic debris in considerable quantity, and matters foreign to Calculi.

The fragments of Calculi in the collection marked "D" were numerous, and of sizes varying from small fragments to ⅞ inches in length, 5/16 inches in width and 9/16 inches in thickness. Some of the fragments were white and others were gray in color. On chemical analysis they were found to consist partly of the variety known as "Fusible Calculus," Ammonium and Magnesium Phosphate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in traces, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly spherical in shape, consisting of Crystalline layers from ⅜ to ¼ of an inch in diameter. They were of a brown color, and on analysis were found to be chiefly Uric Acid, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,

Analyses F, G and H, omitted for lack of space. R. OGDEN DOREMUS.

Water in Cases of One Dozen Half-Gallon Bottles, $5.00. F. O. B. Here.

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THOS. F. GOODE, Proprietor, - - Buffalo Lithia Springs, Va.

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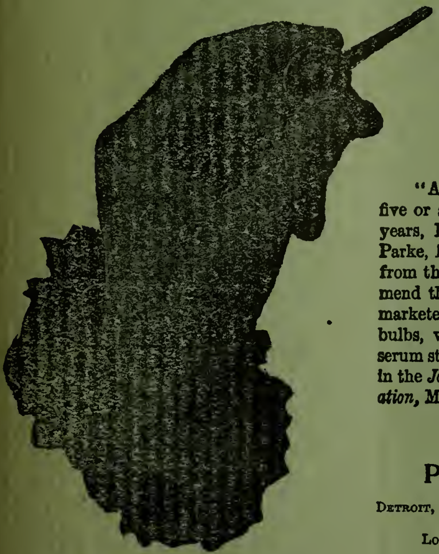

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The fragments of Calculi in the collection marked "D" were numerous, and of sizes varying from small fragments to 7/8 inches in length, 9/16 inches in width and 5/16 inches in thickness. Some of the fragments were white and others were gray in color. On chemical analysis they were found to consist partly of the variety known as "Fusible Calculus," Ammonium and Magnesium Phosphate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in traces, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly spherical in shape, consisting of Crystalline layers from 1/8 to 1/4 of an inch in diameter. They were of a brown color, and on analysis were found to be chiefly Uric Acid, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,

Analyses F, G and H, omitted for lack of space.

R. OGDEN DOREMUS.

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NORTH CAROLINA
MEDICAL JOURNAL.

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XLI WILMINGTON, OCTOBER 5, 1897. NO. 7.

Original Communications.

AS YOU LIKE IT.

By W. C. GALLOWAY, M. D., Wilmington, N. C.

A number of years ago, when engaged in general practice, two sisters from an adjoining county on a bright Sunday morning, came to see me, the younger professionally. She stated that the night before while undoing her hair previous to retiring, she dropped a pin in her right ear, and ever since she had suffered mortal agony, had sat up about all night, and had not closed her eyes in "sleep that knits up the ravell'd sleave of care." She was quite nervous and her face was pale and careworn. Hearing that I did work on the ears caused her to seek me, and she wanted me to extract the pin in short order so she could get ease and have her mind relieved. I led her to a window where the sunlight streamed in and obtained a perfect view of the lumen and drumhead which "looked a thing of beauty," and ought to have been a „joy forever." There was no sign of a pin or any foreign substance, no breach of continuity anywhere, and no trace of disease at any point. The Gods would not wish to see a finer or more healthy specimen of tympanum and external auditory canal. I said to her in the plainest, most direct language I could command, that there was no pin in her ear and had not been. It was possible, however, that in taking down her hair, a pin might have touched her ear, but did not enter. She replied in crisp, positive tones, *a la* Mrs Betsy Trotwood, that I was mistaken—the pin was in her ear, pushed up to its head, and it was hurting her so she could not keep still. To appease her I looked again and informed her as before, but she would not be comforted.

It was a case of Banquo's ghost; it would not down. She not only wanted me "to scotch the snake but kill it." While I was trying to think of some "sweet oblivious antidote" to cure her of her tangled hallucination, I bethought me of a ruse. I called her back to the window the third time; then reached over and got a pin out of a convenient pincushion and dropped it in her ear unobserved; and, after searching in the ear for awhile, told her I had discovered a pin *way down* at the drumhead. I went to my case of instruments, laid several out where she could see them, caught up a pair of small forceps, and in grasping the pin I also included a small portion of the lumen of the canal to induce pain for its effect, taking a little time about it, and all at once extracted the pin and proudly held it up before her. I think she was the most delighted person I have ever seen. Her face was radiant with smiles, and she lauded my effort to the skies, remarking that she was perfectly easy, and I might have preached to her until doomsday and I could not have convinced her that the pin was not in her ear. I am not only almost, but fully persuaded that if I had not used strategy in her case, the hallucination would have deepened into fixed delusion.

On Feburary 3rd, '95. T. B. 38 years old, white, baling cotton, an iron hoop slipped out of his hand, flew back and the end of it struck him in the left eye, lacerating cornea and iris and luxating lens.

Saw the case eight days after the injury. Found eye badly inflamed—a clean cut wound in cornea extending from the margin of the limbus internally to near the pupil, which had partly firmly healed. Iris was inflamed and cut at end near the papillary edge; it was also dilated, due to atropia sulph. which had been prescribed. Lens partly in the anterior chamber, and at one or two points adhered to iris. Deemed it prudent to leave old cicatrice alone, but made in the upper quadrant of cornea an incision two or three millimeters within limbus as in cataract operation, but not very large.

Performed small iridectomy and removed all but some shreds of the lens, a slight amount of vitreous escaping. Used atropia sulph. to keep pupil enlarged, bandaged eye, together with good one, after the usual plan and kept patient in dark room. Washed eye each day with a weak solution of boracic acid and mur. cocaine. The subject made a good recovery. Eye got perfectly well and retained fair vision. No sympathetic indications occurred in sound eye.

On the 28th of last November a pupil at the graded school 14 years old, stepped on the end of a long stick while walking in the woods, and the other end flew up suddenly and struck him with considerable force over the the upper lid of the left eye. Investigation disclosed a fractured cornea, limbus to limbus, obliquely across, running above internally and externally below. Lens discharged; iris, torn and shreddy, protruded largely through the open wound. Under cocaine, cut off the ragged portions, replaced remainder, instilled strong solution atropia sulph. Bandaged eye and kept up cold application for three or four days, and used as a cleansing lotion:

℞—Acidi boracici . . . . . ʒ i
Aquæ fontan. . . . . . Oi.

Patient remained in dark room ten days, the greater part of the time in bed. Afterwards gradually admitted more light from day to day. Used atropia sulph. as a mydriatic. Marked inflammation arose, but the cornea healed kindly with a tiny portion of iris attached in the wound. The case progressed slowly, but entirely recovered with some vision. The good eye remained intact.

January 21st, '97. W. B. S. aged 50, while running a stave joiner in a barrel factory, a sliver from the stave, 3 inches long, ½ inch wide, sharp at the end, flew off and struck him in the left eye, which knocked him blind and made him spin around like a top. His wife removed three small splinters from his eye. He stated that the eye ran nothing but water and matter; the latter no doubt being vitreous. Saw the eye first time January 26th, five days after the accident. The centre of the cornea presented an irregular circular wound $\frac{3}{16}$ of an inch in its widest part, with iris protruding. The lids were swollen and the eye very red. Iris was torn from its attachment, inner quadrant, for the space of ten millimeters. Lens was luxated into the anterior chamber. Eye was very painful and there was marked photophobia. After cleansing eye antiseptically, instilled atropia sulph. and cocaine mur., and snipped off the protruding iris which was ragged and adhered to wound edges. After detaching the iris, vitreous began to escape quite freely and I promptly bandaged the eye.

This was an ugly case, and I felt sure I would have to enueliate the eye to save the right one, and advised the operation, but he objected.

While under ordinary circumstances I deem it best to remove traumatic cataract, I doubted the wisdom of doing so in this case on account of the free oozing of vitreous and the larger amount of detached iris. I, therefore, decided to bide time and rely upon atropia sulph., rest, etc. He was nearly three months getting well. Lens largely absorbed, and there is some vision. The eye gives no trouble. The good eye, though suspicious once or twice, has escaped.

Ac med J (OS) 41:214-216, #7, 5 Oct 1897.

A CASE OF APPENDICITIS.

By H. S. Lott, M. D. Salem, N. C.

THE patient, a boy of seven, was first seen at midnight August 17th. On Sunday, two days previous, began suffering with "pain in the stomach," for which the mother gave dose castor oil, which was followed by copious watery stool but no relief of pain. Suffered Monday and Tuesday but parents thought it an attack of colic and saw no reason to call a physician until Tuesday night.

When called I found the boy lying on his right side with the knees drawn well up toward the abdomen, temperature 103°, would take no food, intense pain on moving. Upon examining the abdomen could detect, with ease, a mass in region of appendix, with rigidity of overlying muscles.

I told the parents that it was most likely a case of appendicitis, and that unless there was decided improvement within a few hours I should strongly advise operative interference.

On the following morning I found the condition even more distressing, no food taken and the small doses of salts being rejected. At noon the symptoms were most alarming, temperature in axilla 105° pulse 150, and abdomen becoming distended. After a consultation with Drs. Bahnson, Dalton and Hill, the latter a visitor in our city, and all of whom kindly assisted me with the operation, the patient was removed to the Twin-City Hospital.

When put on the table the temperature was still 105°, and pulse 150, with delirium. Upon opening the abdomen I found extensive adhesions between omentum and bowel which were broken up, even as far as the median line, accompanied by a copious discharge of offensive pus. Much difficulty in finding appendix, which was finally located in a firmly adherent mass of omentum. Isolated as completely as possible, applied ligature around infiltrated portion of omentum; also transfixed appendix, close to bowel, with double ligature, tied with link, and removed entire mass. Found enterolith in removed portion of appendix. Touched patulous lumen of stump with pure carbolic acid. Flushed abdominal cavity with warm sterilized water, closed incision, in part, with four interrupted sutures, through and through, introduced gauze drain into upper portion, dressed with gauze and roller abdominal bandage, and, at close of operation found patient reacting well and in good condition.

With immediate relief of all alarming or distressing symptoms the little patient's recovery from the hour of the operation was progressive and practically uneventful.

The after treatment of the case was the most simple. Gave "Kettle tea" for the first forty-eight hours, or until after bowels were emptied, which was accomplished with perfect comfort by beginning on the morning of the second day with small frequently repeated doses of epsom salts, which was kept up at such intervals as was deemed necessary during the confinement of the patient; the diet thereafter being chiefly liquid or at least readily soluble. Removed the dressing with the gauze drain on the morning of second day and found drainage ample and closed portion of incision uniting by first intention.

After this dressed each morning, and found less discharge and more healthy appearance of incised tissue on each occasion. On the sixteenth day after the operation the boy was restored to his home.

Selected Papers.

AN ADDRESS ON MALARIAL FEVER.

By William Sidney Thayer, M. D., Associate Professor of Medicine in the Johns Hopkins University.

[Continued from page 194.]

THE only positive diagnostic sign of malarial fever is the discovery of the parasites in the circulating blood. The search for the organism is a relatively simple matter to anyone who is familiar with the use of the microscope and the examination of the blood. It is, however, just as impossible for one who is not familiar with appearances of fresh blood, as well as of its more important pathologic changes, to determine the presence or absence of certain forms of the malarial parasite, as it is for one who is ignorant of the kidney to determine fine strucural changes in a microscopic section of that organ.

This is a point which should not be forgotten. The study of the blood has until very recently been neglected in our medical institutions, and there are but few who have not paid especial attention to this subject who are capable, without a certain amount of practice and study, of forming an entirely reliable opinion concerning certain forms of the malarial parasite in a specimen of blood. For one who has not paid particular attention to the appearance of fresh or stained specimens of blood, not days, but weeks, nay, even months of study may be necessary before he becomes capable of postively deciding upon the nature of various changes which are not infrequently met with in the circulating blood, changes which sometimes very closely simulate malarial parasites.

On the other hand, it should be said that the large tertian and quartan organisms and the crescentic and ovoid forms occurring in estivo-autumnal fever are readily recognizable by anyone who has seen them a few times. The positive diagnosis of such cases is easy. In the case, however, of certain of the smaller forms, especially of the estivo-autumnal parasite, the opinion of a skilled observer alone is reliable, a statement which is, unfortunately, daily proved in current medical literature.

Many physicians who are in active general practice are as unable to give proper time for such examinations as they are to satisfactorily examine the sputa in many doubtful cases of tuberculosis, but it is always possible for such a physician to prepare dried smears of blood and to send them to an individual who is capable of properly studying them.

Far be it from me to say that the examination of the blood is always necessary for a practical diagnosis of malarial fever. In the vast majority of instances the therapeutic test is sufficient, and one of the greatest benefits which the discovery of the parasite has brought to us has been the definite proof of this fact. This is one of the most important services which the discovery of the parasite has rendered to us. How often previously in fevers which have not presented all the ordinary clinical manifestations of typhoid has the physician remained in doubt as to their possible malarial nature, even after they have failed to yield to quinin!

The discovery of the parasite has taught us that the failure of such a fever to respond within three or four days to the drug is absolute proof of its non-malarial nature. The importance of this fact cannot be overestimated, and no one feels it more than the physician who has practiced for any length of time in a district where both malaria and typhoid fever are common. There is no excuse today for cinchonizing a patient with typhoid fever; if treatment by sufficient doses of quinin prove ineffectual after four days we may abandon our diagnosis of malarial fever.

Another point which the discovery of the parasite has assisted in elucidating is the subject of the so-called "typho-malarial" fevers. Improved methods of observation have shown that the complication of typhoid and malarial fevers is relatively rare. It would indeed be extraordinary if occassional cases did not occur, and such cases are observed, but in these instances the case presents features of a simple complication of two distinct and separate diseases. There is nothing characteristic in the course of such infections. The malaria is as readily amenable to treatment as under other conditions.

The great majority of chills occuring in typhoid fever have nothing whatever to do with malaria; the parasites are not present in the blood and the manifestations are unaffected by quinin. Such chills represent in most instances, probably, secondary infections or auto-intoxications of intestinal origin. There is no such disease as ‘‘typho-malarial’’ fever, and the sooner we cast aside the term the better.

Certain forms of estivo-autumnal continued malarial fever may, however closely simulate typhoid, and it may not be out of place here to enter for a moment more minutely into the points in differential diagnosis. I have upon the chart a table, taken from a publication now in press* which presents in parallel columns the more important points of difference between the remittent estivo-autumnal fever and typhoid fever.

REMITTENT FEVER,	TYPHOID FEVER.
Onset generally intermittent.	Onset gradual and progressive.
Irregular remissions.	Regular, though very slight morning remissions with evening exacerbations of temperature.
The temperature may arrive at 40 degrees (104degrees) within twenty-four hours.	The temperature does not raach 40 degrees (104 degrees) before the third or fourth day.
Headache rare in the beginning; of a neuralgic character, pulsating, variable in its position and intensity. Sclera subicteric from the onset.	Headache from the beginning; permanent, severe, frontal. Sclera white.
The apathetic expression of the face, the dryness of the tongue, sordes upon the teeth are not very marked.	These symptoms are well marked and progressive.
Breath foul.	Breath has a mouse-like odor.
The delirium may come on in the early days; it is recurrent but changes with the exacerbations of temperature and other symptoms, and may give way to grave symptoms related to other organs.	Delirium appears only when the disease is well pronounced; it is often persistent and variable only in degree
If there be pulmonary congestion the cough and other symptoms come on suddenly; the areas affected change from one to the other lobe or lung and may disappear and reappear again with varying intensity; dyspnea is very pronounced; circulatory disturbances are marked, even syncope.	Pulmonary congestion is gradual and persistent; always hypostatic (the base and dorsal surfaces of the lungs); the dyspnea is less pronounced, and later in appearing, depending more upon the abdominal conditions (tympanites etc.)

There is marked restlessness and anxiety, (jactatio corporis)	There is usually relaxation, prostration, stupor.
Peculiar greenish yellow color of skin; sometimes a slight jaundice.	No jaundice.
Herpes common.	Herpes rare.
Anemia more or less marked early in the course.	Anemia absent excepting in latter stages.
No characteristic exanthem; urticaria not uncommon.	Characteristic roseola.
At times there may be transient tympanites or ileo-cecal gurgling; they are but slightly pronounced and paroxysmal; diarrhea is slight or absent and has not the characters of that in typhoid fever.	Tympanites, gurgling, diarrhea appear slowly and may become well marked.
No distinct course.	Has a fairly characteristic course.
Urine high-colored; may show a trace of bile; Ehrlich's diazo reaction rarely present.	Urine high colored; bile absent; diazo-reaction present during the height of the process.
Blood shows no leucocytosis; eosinophiles not notably diminished; serum does not cause agglomeration of typhoid bacilli (Pfeiffer, Durham, and Widal); malarial parasites and pigmented leucocytes present.	Blood shows no leucocytosis; eosinophiles diminished or absent; serum causes agglomeration of typhoid bacilli; malarial parasites and pigment absent.
Fever disappears under quinin.	Fever unifluenced by quinin.
Is an endemic disease occuring particularly in rural districts; rarely epidemic.	Usually epidemic; prevailing commonly in cities.

I doubt if the medical public realizes how much the discovery of the parasite has taught us with relation to this one point in the differential diagnosis of malarial fever. We are carried slowly onward on the river of medical progress into new ideas and theories, and gliding almost unconsciously out of the old forests of obscurity into the ever-widening clearings opened by science, we often forget how much we have learned in a relatively short period of time.

We know today that in Baltimore, for instance, a district where malarial fever is extremely common, fatal malaria is a rare occurrence; we know that, barring a few imported pernicious cases, fatal malarial fever is almost unknown in such a city as New York or Brooklyn, and yet gentlemen, let me call your attention to a few statistics taken from the United States census for the six years ending in 1890, statistics to which attention has already been called by Dr. Osler. In the city of New York during these six years there were reported:

Deaths from malarial fever, 2,060, or 24.26 per 100,000 of average population.

Deaths from typhoid fever, 2,031, or 24.27 per 100,000 of average population.

In Brooklyn for the same period there were reported:

Deaths from malarial fever, 1413, or 32.62 per 100,000 of average population.

Deaths from typhoid fever, 1,002, or 23.13 per 100,000 of average population.

In the city of Baltimore during the same period of time there were reported:

Deaths from malarial fever, 934, or 41.51 per 100,000 of average population.

Deaths from typhoid fever, 904, or 40.17 per 100,000 of average population.

Now, gentlemen, during the seven years the Johns Hopkins Hospital was opened, two of the years being included among those in which these census statistics were complied, there occurred in the hospital: Deaths from malarial fever, 3; deaths from typhoid fever, 48; a proportion of one death from malarial fever to sixteen from typhoid.

It is wholly safe to say that at least nine-tenths of these reported statistics are incorrect, the vast majority of the so-called malarial fever being doubtless typhoid. And we forget that as short a time as seven years ago we regarded such statistics with complacency.

But if the Baltimore statistics are surprising, in Brooklyn and New York, where it is extremely doubtful whether a single case of pernicious malarial fever occurs, apart, perhaps, from a few coming from the tropics, the statistics are simply appalling; and let me repeat, there is no excuse for such statistics today, for the discovery of the parasite has not only given us in itself a sure method of diagnosis, but it has taught us to realize with what complete confidence we may rely upon the therapeutic test with quinin in the differential diagnosis of malarial fever.

The discovery of the malarial parasite has been of invaluable assistance in the differential diagnosis of a number of other manifestations of malaria which might otherwise be overlooked. This is especially true in certain pernicious paroxysms, particularly the comatose form which is frequently confounded with sunstroke. In algid and choleriform paroxysms, which may occur indeed without a chill and with sub-normal temperature, the examination of the blood may often save life by giving us an immediate diagnosis. The examination of the blood is also of considerable assistance at times in helping us to make a ready diagnosis between tuberculosis and certain septic conditions associated with intermittent fever. Had we in private practice a carefully-kept two-hourly chart to show us the exact hour of onset and the exact duration of paroxysms in all these instances, our diagnosis might be relatively simple, but we know too well that this is not the case, and confusion between early tuberculosis and malaria in the neighborhood, for instance, of Baltimore is excessively common.

A ready means of differential diagnosis between malarial fever and various post-partum and post-operative infections is afforded us by the presence of the parasite in the blood. Careful observation tends to show that the majority of post-partum and post-operative chills are not malarial in nature, and the early recognition of this fact, as permitted by blood examination, should put us on the lookout for some other septic complication.

Now, gentlemen, can we say with assurance that the malarial parasite is always to be demonstrated in the circulating blood in every malarial infection? May we postively deny the existence of a malarial infection from the absence of the parasite in specimens of the circulating blood? Literally speaking, we cannot, for there are instances of malarial infection in which careful search of the blood fails to show the parasite. Practically, however, we can, for such cases are rare and unimportant. In any case of tertian or quartan fever of sufficient severity to produce symptoms, reasonably careful examination of the blood will always show the malarial parasite. Occasionally, in estivo-autumnal fever, in which, as has been before noted, the parasites tend often to gather especially in the internal organs, particularly at a period during or just before paroxysm, the number of parasites in the peripheral circulation may be extremely small, and rarely, though occasionally, a single careful examination may prove negative. Almost invariably, however, a subsequent examination will reveal the parasite.

There are no cases of pernicious malaria in which the parasites are not present in the blood in sufficient quantities to immediately call our attention to the nature of the case.

What have we learned with regard to the treatment of the disease? Much. We have learned, in the first place, that quinin is a true specific. We have definite proof that those occasional cases in which quinin has appeared to be inefficacious are clearly not cases of malaria, or at least are cases in which there is a complicating disease.

We have been confirmed in our ideas as to the time when quinin should be given to be most efficacious, by the explanation of the cause of its action. It has been shown that the organisms are most readily affected at the time when they are free in the circulation, and that period only occurs at the time of sporulation, namely, just before and during the paroxysm.

In ordinary intermittent fevers a sufficient dose of quinin, given just at the time of the paroxysm, will almost entirely destroy the group of parasites then segmenting, and will prevent, for some time, at least, further manifestations on the part of that group of parasites. Continued treatment, however, is usually necessary to entirely destroy the infection. We have then a practical foundation for the fact already made out that the time at which the best result is to be obtained from the administration of large doses of quinin is just at the period of the paroxysm, or at the time when the paroxysm would have occured, had previous treatment been omitted.

* * *

But I have already passed beyond my proper limit of time. Let me remind you, however, in conclusion, that Lavern's discovery ot the parasite, which has done so much to bring order out of the chaos of our continued fevers, was not made by chance; it was the result of carefully planned investigation. Such results as this do more to prove the value of careful, scientific clinical and laboratory observation than books of argument.

We now know the pathogenic agent of malarial fever; we possess a simple and certain method of diagnosis; we have in quinin a true specific remedy for the disease. But we have yet a higher goal to reach. We must discover a means of prevention, and the first step toward this is to discover the method of infection.

It may well be that we are not far from this discovery. It is one of the most hopeful fields for research which is now open to us, and it is a field in which our climate offers us unusual opportunities for study.

Let us hope that we in America may play as honorable a rôle in the clearing up of the obscure questions connected with malaria as did our illustrious predecessors, the little group of students of Louis, in the differentiation of typhus and typhoid fever. —*Cleveland Journal of Medicine.*

INFECTIOUS DISEASES AFTER REMOVAL OF THE SPLEEN.—Blumreich and Jacoby (*Berliner klinische Wochenschrif*, 1897, No. 21). The enlargement of the spleen in infetrious diseases gave the author the idea of removing this organ, and then infecting guinea-pigs with various bacteria or their toxins. The authors experimented with biptheria, anthrax, pyocyaneus, and cholera. In the case of anthrax the results were doubtful. With all the others however, it was seen that if injected with the toxin, both the animals with and without their spleens reacted in the same way. However, when the bacteria themselves were used the splenectomized animals lived longer or died less often than the normal ones. The same result was obtained if the splenic vessels were tied. The defibrinated blood of animals before and after splenectomy was mixed with virulent cultures of bacillus pyocyaneus; in the latter case it could be shown to have more marked bactericidal, but no more antitoxic, properties than in the former. The leucocytes were counted in sixteen animals before and several times after the removal of the spleen; fourteen times a marked leucocytosis was found. The increase in white blood-cells does not come from the irritation of the wound. The authors think they are justified in saying "following the excision of the spleen there occurs an hyperleucocis. In connection with this there is an increase in the bactericidal power of the blood and in the protection of the organism against infectious disease."—*Med. Sciences.*

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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Editorial.

RELIEF FOR THE DYING.

The function of the physician is preminently to save life; or if it cannot be saved, to postpone the hour of death as long as possible in the belief that "while there's life, there's hope." But it is also the physician's duty to prevent suffering, and there is every reason for him to remember this while he is standing beside the death-bed of a patient. While there are some instances in acute diseases when a change for the better occurs and the patient finally recovers when there had seemed no earthly hope, there are many cases where the physician knows that death is inevitable- that though a rally is possible, it means only a prolongation of suffering. In many of these cases the patient is too weak to make known his suffering, which may only be revealed by the facial expression and the restlessness. There is no reason why these poor creatures should not have relief, and the doctor should not stand by idly, thinking that they are not conscious of their suffering. A small dose of morphia, or tincture of opium will give infinite relief, and one who has seen the look of anxiety and pain replaced by a peaceful, placid expression, and the restlessness give way to quiet, gentle sleep, will not regret having administered the opiate. It takes away the pangs of death and gives courage to the dying. It should be administered in doses sufficient to relieve the patient's suffering, the dose being regulated by the effect.

Munk, in a recent paper in the *Practitioner*, says "So long as the air passages are not obstructed by secretion, so long as there is no lividity or even duskiness of the face, opium, if indicated, may be given in aid of the euthanasia, but if they are present it ardous and might hasten death. Much care, too, is needed in the employment of opium in cases where the heart is greatly enfeebled, and where the conditions directly or indirectly induced by opiates, especially that of sleep, may be just enough to turn the balance against it. A contracted pupil is also a contra-indication to opium. It implies a state of the brain which opium is likely to increase rather than relieve. And if food has been injudiciously pressed upon the patient so that the stomach is distended with it, and the epigastrium is full and tense, opium given by the mouth is rarely found to act kindly if at all. If, under such circumstances, the influence of opium is needed, we should resort to the hypodermic injection of morphin.

While the above conditions may contra-indicate the administration of opium where there is a possibility of ultimate recovery, we do not think they should deter the physician from giving such freedom from suffering as he may in those cases where death is inevitable in a few hours. We have seen a patient in whom it seemed that death might result at any moment from strangulation due to the accumulation of mucus in the trachea, sink into a gentle peaceful slumber, with breathing as soft as that of a sleeping child, through the influence of a small dose of morphine.

THE BONDING OF MEDICAL EXAMINERS.

This subject was brought up for discussion in the recent National Convention of Mutual Life Underwriters. The position held by the medical examiner is a very important one, for upon the results of his report to the medical director, the applicant is either accepted or rejected. It is of the utmost importance to the Companies, therefore, that the examiners perform their duties thoroughly and send in honest reports. It is not surprising that they should try to devise some way in which to ensure consciencious work on the part of their examiners. There was a proposition that each examiner should give a bond for the thorough performance of his duties. This plan was objected to by some of the members for various reasons. It would require a great deal of red tape and expense; examiners would decline to serve a company that could not trust them; and there would be much difficulty in collecting the bonds, if it could be done at all.

Dr. Eaton, medical director of the DesMoines Life Association, advocated the preparation of a "white list" upon which should be placed the names of those examiners which the various companies would vouch for as being thoroughly reliable and competent. He held that the incentive to be placed on this list and to remain upon it would be so great that it would do more to secure good service from an examiner than would result from placing him under a commercial bond.

However, for a company to be absolutely certain of the honesty and ability of an examiner it must have had considerable dealing with him. It would hardly be probable therefore, that recently appointed examiners would obtain a place on this "white list," and as it is evidently the intention of the doctor to have all the work of the companies thrown into the hands of those selected, there would be no opportunity given for others to build up such a reputation as would entitle them to promotion to the "white list." Not being on the "white list" would be equivalent to being on the "black list." We do not believe that this plan will work well, but that the insurance companies will have to take their chances with the balance of mankind who have to entrust their business to agents. Let them use every precaution in the selection of their examiners, then if an examiner proves unreliable drop him.

Reviews and Book Notices.

Hysteria and Certain Allied Conditions.—Their nature and treatment, with special reference to the aplication of the Rest Cure, Massage, Electrotherapy, Hypnotism, Etc. By George J. Preston, M. D. Professor of Diseases of the Nervous System, College of Physicians and Surgeons, Baltimore; Visiting Physician to the City Hospital, etc., etc. Illustrated. Cloth, octavo, 300 pages. Price $2.00 P. Blakiston Son & Co., Philadelphia. 1897.

Hysteria, in some of its many manifestations, presents itself to the busy practitioner almost daily. While in some instances the nature of the disease is very plain, there are many instances where great care is necessary to diagnose the condition which confronts us. And then there is too great a tendency for physicians to allow the idea to prevail in their minds that the person with hysteria is not a subject for careful treatment, but should be shoved off with some harmless placebo. On the contrary this disease, for it is a disease as certainly as is insanity, is one which needs treatment, and is often most difficult to treat successfully.

A perusal of the volume before us, and it would be well for all practitioners to read it, will convince one how important a place hysteria holds among nervous diseases. The author has gone over the whole ground very carefully taking up in order its history, pathology, symptoms, diagnosis and treatment. In discussing treatment special attention is given to the Rest Cure and the different steps as recommended by Dr. Weir Mitchell are outlined. The author does not think that hypnotism is very efficacious as a method of treatment, but thanks this system for supplying the general idea, that of suggestion, employed in the successful management of this troublesome condition.

John Hopkins Hospital Reports.—Volume vi. The John Hopkins Press, Baltimore, 1897.

This volume embraces a report in Neurology, by Henry J. Berkley, M. D., in which is considered the lesions produced by the action of certain poisons on the cortical nerve cell. The pathological conditions studied are those produced by alcoholic poisoning; Serum poisoning; Risin poisoning; the action of the Toxine of Experimental Rabies on the Cortical Nerve cell of the Rabbit's Brain; Pathological Alterations in the Nuclei and Nucleoli of the Nerve Cells from the Effects of Alcoholic and Ricin Poisoning.

The report in Pathology embraces the following papers: Fatal Puerperal Sepsis due to Introduction of an Elm Tent; Pregnancy in a Rudimentary Horn, Rupture, Death, Probable Migration of Ovum and Spermatozoa;Adeno-yoma Uteri Diffusio Benignum; by Thomas S. Cullen, M. B. (Tor.); A Bacteriological and Anatomical Study of the Summer Diarrheas of Infants, by William D. Booker, M. D., The Pathology of Toxalbumin Intoxication, by Simon Flexner, M. D.

The reports cover more than four hundred pages,and are well illustrated by plates.

Correspondence.

"R. & S. COMP." NEW YORK CITY.

Editor N· C. Med, Jour.

Allow me to correct what appears to be a mistake in your JOURNAL of September 5th.

Under the head of "Therapeutic Hints" the familiar "R & S Comp" is given as being composed of:

℞—Pulv. Rhei.	ʒ iv
Sodii bicarb.	ʒ i
Spts. Menth. Pip. . .	ʒ ij
Aq. qs. ad.	℥ iv

This particulao formula originated I think in The Roosevelt Hospital and now appears in the formulary of nearly all the Hospitals. I have consulted the formularies of the institutions with which I am connected, Vanderbuilt Clinic, St. Bartholomew Clinic and Hospital, Columbus Hospital, and New York Polyclinic, and find them all the same, as follows:

Mist. R & S.

℞—Pulv. Ipecac.	gr. ¼
Pulv. Rhei.	gr. ii
Sodii bicarb.	gr. v
Aq. Menth. Pip. . . .	q.s. ʒ ii

M.—Sig. ʒ ii (one dose.)

& S comp.

℞—Pulv. Ipecac.	gr. ¼
Pulv. Rhei.	gr. ii
Sodii bicarb.	gr. v
Tr. Nux. Vom.	mx. ʒ i

.—Sig. ʒ i (one dose).

Very Truly Yours.
E. PIERRE MALLETT.

[The formula referred to by Dr. Mallett as appearing in the issue of September 5, originated, we think, in Bellevue Hospital and is published in the Hospital Formulary of the Department of Public Charities and Correction of New York City. We are pleased to publish Dr. Mallet's communication, however, as it presents two other valuable formulæ]

Abstracts.

CURATIVE ACTION OF HYPERÆMIA.—Bier(*Münch. mec. Woch.*, August 10th, 1897) has chiefly employed passive hyperæmia in a large number of cases, especially in so-called surgical tuberculosis. The extremity is well bandaged up to the disease, and then an elastic bandage is placed above the disease. Bier maintains what he has previously said about this method of treatment, and adds that, combined with conservative operations, he has seen very good results. In some of his former cases he says that the cure is so complete as hardly to show a trace of the former disease. In cases of syphilitic disease and in two of sarcoma the disease rapidly got worse under this treatment. In gonorrhœal articular affections the author has seen good results in 11 cases, so as to warrent its repetition. The inflammatory manifestations and the pain rapidly disappear. He has used this treatment in rheumatism with varying results. The best results were obtained when the hyperæmia was induced in a marked degree. Cases of arthritis deformans and chronic rheumatism at times showed considerable improvement; sometimes, however, it was quite useless. In a case of genuine gout no benefit was seen. Bier was induced to try the treatment by the circumstance that vascular venous engorgement confers a certain degree of immunity against tubercle. He has tried an active hyperæmia by hot air and by hot water. With hot water the effect upon superficial tuberculosis is not as great as with hot air. Lupus will heal quickly if it be so placed that it can be covered by a dry cup, the engorgement thus produced bringing about a rapidly curative effect. The method can have only a limited application here. The effect of passive hyperæmia upon tuberculosis is much greater than that of active hyperæmia. Hot air gives better results in arthritis deformans and chronic rheumatism than in tuberculosis. The author discusses the question of how hyperæmia is able to influence local disease and especially infective disease. Whatever the explanation may be, yet the efficacy of the treatment, in the author's opinion,cannot be doubted. The method must be properly carried out. The most important rule is that the hyperæmia should never cause pain; on the other hand, it should rapidly relieve it. Thus, if the bandaging produce pain, it should be loosened. On the other hand, in order to secure success the hyperæmia must be considerable.—*British Medical Journal.*

PHOTOGRAPHING THE STOMACH.—Dr. Edward O. Schaf, of Newark, (*Med. News*) has invented an electric light and camera for photographing the interior of the stomach. The invention is intended to assist in diagnosticating obscure ailments, such as cancer of the stomach. He states that two weeks ago he was able to successfully photograph the interior of the stomach in a living person, and obtained a perfect picture of the pyloric mucous membrane. The great difficulty is in properly focusing the membrane. In the experiments upon dogs anesthetics were used, but the pictures obtained were unsatisfactory. The explanation of this lay in the movements of the stomach. The organ ascended and decended with the diaphragm at each expiration and inspiration. This trouble was overcome when the camera was introduced into the human subject, the patient holding his breath during the exposure of the film. No narcotics are required in individuals, there being no pain connected with the operation. Only five to eight seconds' exposure to the electric light is necessary,and for this length of time a patient can easily suspend respiration.—*Am. Prac. and News.*

THE AGGLUTINATION OF TYPHOID BACILLI BY CHEMICAL SUBSTANCES.—Malvoz (*Ann. de l Institut Pasteur*, July 25th, 1897) has investigated the action of various chemicals upon typhoid bacilli. In the first place he finds that certain bodies such as formalin, corrosive sublimate, peroxide of hydrogen, and strong alcohol, coagulate the bacilli and produce a fairly typical agglutinative reaction, but only when used in concentrated solutions. The essential characteristics of the typhoid serum in this respect is, however, its power of acting when extremely dilute, and the author's next endeavor was to find some chemical substances which should have a comparable action. Chrysoidine, which is stated by Blachstein to agglutinate cholera vibrios, was found by Malvoz to have no action on typhoid bacilli, nor was any reaction obtained with induline and nigrosine; safranine and vesuvine, on the other hand, gave the typical reaction even in very dilute solutions, and the agglutination was rendered more obvious by the slight coloring of the bacilli. Thus 3 drops of a 1 in 1,000 solution of these reagents added to a 1 c.cm. of typhoid emulsion produced the characteristic reaction just as the blood of of a typhoid patient would. Mineral acids, phenol lactic acid, and chloroform have no agglutinating power, while salicylic acid and strong solutions of potassium permanganate give a reaction which is by no means characteristic. Caustic soda and ammonia do not agglutinate bacilli suspended in distilled water, but act on them if in tap water, a difference no doubt associated with the deposition of calcium carbonate. Salimbeni's experiments on the part played by oxygen in agglutination are not confirmed by Lambotte. Malvoz finds that an artificial "typhoid" serum can be made by adding 1 c.cm. of a 1 in 1,000 solution of safranine to 9 c.cm. of ox serum. He suggests that as the urine of typhoid patients gives a marked diazo-reaction, the agglutinative power of their serum may be due to a nitrogenous compound allied to vesuvine or safranine. He has further applied his discoveries, to the differential diagnosis of bacteria; thus, for, instance, a concentrated solution of formalin agglutinates typhoid but not colon bacilli, the difference being visible to the naked eye. Again, 1 in 1,000 safranine serum prepared as above causes agglutination of typhoid bacilli, while the colon bacilli is not affected by a 1 in 100 serum. Some further experiments tend to show that the ciliated envelope of the bacillus is the seat of the chemical changes leading to agglutination. Finally Malvoz suggests that his results may be applied clinically with advantage.—*British Medical Journal.*

CONNECTION BETWEEN THE URIC-ACID DIATHESIS AND VARIOUS DISEASES.—Lange (*Hospitalstidende*, p. 1, 1897) and F. Levison (*Ugeskrift for Läger*, p. 339, 1897) discuss the connection between uric-acid diathesis and different diseases. Lange supports the theory that a great portion of nervous diseases—such as neuralgia of n. trigeminus, and paralysis of n. facialis, as well as iritis, different skin diseases, asthmatic attacks etc., and especially a certain form of mental depression—may all be caused by the influence of the uric acid dissolved in the blood. He gives numerous protocols of patients to illustrate the diseases and to support his opinion of the nexus between them and the uric-acid diathesis.

Levison on the contrary, strongly opposes the use of the term "uric-acid diathesis;" he states that the word "diathesis" has no sense if it does not signify the presence of a microbic or toxic substance circulating with the blood and causing different disorders. Now, uric acid cannot be regarded as a toxic substance; it has been proved, as well clinically as by experiments, that even a large quantity of uric acid may be found in the blood or introduced experimentally in it without causing any disorder as long as the uric acid remains in solution; it can only be variable when it is deposed in the kidneys as crystalline uric acid or in the body as biurate. The nexus between uric-acid excretion and the different diseases must consequently be explained otherwise. In some cases the diseases give rise to destruction of leucocytes, causing the production and excretion of much uric acid; in these cases the hyperuia is the consequence of the primary disease. In other cases the kidneys are irritated by the continuous deposition of uric-acid crystals, and this irritation of the kidneys causes reflex neuralgias in different nerves and also the mental depression. This nexus is very commonly seen in children. Kevison has collected twenty-one cases of mental depression in children from 2 to 13 years of age, caused by uric-acid deposits in the kidneys.

In all cases treatment at some alkaline spa made the mental symptoms disappear in a few days. Although the symptoms rapidly disappear, the treatment must be continued for a very long time, perhaps for years, as the mental depression comes back as soon as the urine does not keep the uric acid dissolved; in many cases the deposition of uric acid is caused by destruction of leucocytes, giving rise to hyperproduction of uric acid, and there may be occasion to give the patients tonics,—such as iron or arsenic.—*Univ. Med. Jour.*

CHOLECYSTITIS IN ENTERIC FEVER.—V. Dungern (*Münch med. Woch.* June 29th, 1897) first observes that mixed infections are very important in enteric fever, but that the typhoid bacillus may unquestionably be the cause of some complications. Severe complications involving the biliary passages are rare in enteric fever, and here the typhoid bacillus itself is very frequently the cause. As a result of the penetration of the typhoid bacillus into the gall bladder, gall stones may ultimately occur. The author is only acquainted with 4 cases of cholecystitis with or without calculus formation in which the typhoid bacillus was the cause. He gives short details of these four recorded cases, and adds the following one; A woman aged 46, had typhoid fever 14½ years previously. Nearly 5 years afterwards, she had attacks of pain accompanied by vomiting but without jaundice.

During the next one or two years she had many attacks, but then remained quite free from them for six years. The attacks then recurred, and a hard swelling was felt in the region of the gall bladder. This swelling was cut down upon by Kraske, and an abscess was opened, and 150 c.cm. of brownish yellow pus evacuated. The pus was not bile stained. Any connection of the abscess with the gall bladder was not vigorously sought for. No gall stones were found, but occasionally the discharge was stained with bile. The typhoid bacillus was found in the pus in pure culture. It was submitted to all the ordinary tests and gave the serum reaction. It is most probable that the typhoid bacillus penetrated into the gall bladder at the time of the enteric fever, but the interval of 5 years before the first attack of biliary colic is striking. In the last years of the 6 years interval the patient suffered from a periostitis of the lower jaw which may also have been due to the typhoid bacillus. If the above suppositions are true, the typhoid bacillus retained its vitality 14½ years. The patient's blood produced immobilisation and agglutination in typhoid bacilli. The typhoid infection has been known to involve the biliary system even without any intestional lesion. The author then refers to the bacilli coli communis, and its relation to suppuration; this micro-organism may even produce a disease not unlike enteric fever. The typhoid bacilli from the author's case proved themselves virulent when injected into animals, but the virulence was slight.—*British Med. Journal.*

THE TREATMENT OF STRICTURES OF THE RECTUM.—Berger (*Gaz. Hebdom. de Méd. et Chir.*, October 22, 1896), in speaking of this subj ct before the Surgical Society of Paris, considers dilatation as the best method of treating these strictures, especially those due to syphilis.

The treatment should be carried out carefully and gently. The *séances* should be twenty-four to fory-eight hours apart, and it should never be considered necessary to pass the next larger size at each successive sitting at all hazards.

The bougie should be introduced in the axis of the diseased rectum, always remembering that this differs materially from that of the healthy rectum. In passing a new bougie it should enter gently until a resistance is felt; then it should remain for a moment until the stricture relaxes and, as it were, descends of itself upon the bougie. There is apparently a spasmodic element in all syphilitic strictures of the rectum, which readily explains the difference noted from day to day in the ease with which the bougies are introduced.

The dilatation acts only npon the stricture, and does not cure the proctitis which has resulted from the stricture. This must, there fore, be treated with warm antiseptic irrigation.

This method of treatment is not applicable to all cases; it is contra-indicated where there is grave infection, with fever, collapse, and peritonitis; any precarious condition of the patient; an abundant suppuration; marked rectal tenesmus, and a stricture situated high up in the rectum.

In these cases Berger prefers a posterior rectotomy rather than the extirpation of the rectum. The rectotomy affords immediate relief, and is a less grave operation than extirpation; while it affords as much relief, neither is an absolute cure. The extirpation does not cure the proctitis and is followed by relapse; it does not prevent a constrictive inconstinence of fees, while after rectotomy the sphincter will act.—*Medical Science.*

THE DIURETIC TREATMENT OF RENAL DROPSY.—Dr. Nestor Tirard (*Brit. Med. Jour.*) reminds his readers of Manquat's classification of diuretics: (1) Mechanical (*a*) cardiovascular, and (*b*) aqueous diuretics. (2) Renal, (*a*) functional epithelial and (*b*) irritant epithelial diuretics. Digitalis stands as a cardio-vascular diuretic because it increases blood-pressure generally, and also the speed of the flow of blood through the glomeruli, and should be grouped with convallaria, squill, ergot, strophunthas and caffeine. Of the aqueous we may use the acid potassium tartrate, as the imperial drink, or milk, both of which increase the volume of the blood and directly raise arterial tension. The indications for diuretics, following Huchard are: (1) to maintain the action of the kidney; (2) to evacuate fluid effusions; (3) to soothe and diminish irration of the gentio-urinary organs; (4) to modify the urinary excretion, to prevent urinary calcui; (5) to exert a derivative action through the renal passages; (6) to hasten elimination of toxic substances from the organism; and (7) to free the blood of morbid matters which are capable of elimination by the kidneys. In the single instance reported great relief was obtained from the use of theobromine sodiosalicylate (diuretin), first from the asthmatic symptoms, and secondly in the amount of dropsy. It is not believed that in this instance there is any permanent result, but sooner or later the pleural cavities must be aspirated and the anasarca of the lower extremities be relieved by acupuncture or by Southey's capillary tubes. These measures, however, should be postponed as late as is possible, for the strength frequently fails rapidly after drawing large quantities of fluid from the extremities, and there is some risk of exciting inflammatory changes in the neighborhood of the punctures. Twenty grains of the drug were given daily. —*Medical Science.*

THE PREPARATION OF CATGUT.—The many methods suggested for the preparation of catgut since Lister first made it possible for us to utilize this material for ligature and suture purposes, is at once an indication of the uncertainty of the methods which have up to this time been used, and of the readiness with which operating surgeons the world over would use it, almost to the exclusion of other materials, were a method of sterilization introduced which was both reliable and simple.

Catgut, as we receive it from the manufacturer, is and always must be septic. Made largely from the small intestine of sheep, it contains a large proportion of fat and a variety of organisms, all more or less dangerous when buried in a closed wound. The difficulty in producing a satisfactory sterilized gut has been due to, first, the fact that the bacteria are protected by the presence in the gut of a large proportion (20 per cent.) of fat; and secondly, that gut itself is a comparatively perishable article, its tensile strength being destroyed by high degrees of temperature, which exert no injurious effect on silk. Germicides which best reach the organisms in their protected positions are heat and carbolic acid. The degree of heat necessary to destroy the pathogenic bacteria, including their spores, is not greater than 212°F. Other organism resisting even a higher temperature than this have been found in catgut (as demonstrated by Brunner), but they are non-pathogenic and have no surgical importance in the absence of pyogenic cocci.

Thomas Keith following Lister's lead, used catgut largely in his abdominal work. He simply wound the catgut upon pieces of sheet lead immersed in a 10 per cent. solution of carbolic acid in olive oil, and allowed it to stand six months before using. He assured me that this method of preparation gave him thorough satisfaction. On my return from Edinburgh I prepared a large quantity of catgut and after seven years opened a sealed jar prepared in this way and found its tensile strength unimpaired; and judging from the results obtained in the cases in which it was employed it must have been thoroughly sterile. It is not always convenient to wait six months before using gut. To avoid this delay, I have modified Keith's plan, and the results thus far have been all that I could have wished. My method is as follows: Almond oil is used; this is raised to its own boiling point (about 400 degrees), which eliminates the water, and which all vegetable oils contain more or less of, and which if allowed to remain in the oil would convert the catgut into a useless mass. Some of the oil is then placed over a water bath with 10 per cent. carbolic acid. The catgut, loosely wound on microscopical slides of Halstead's glass spools, is placed in this 10 per cent. solution of carbolic acid, in the almond oil, which has been boiled before the addition of the acid. It might be safer to repeat the boiling once each day for three days, but I have been in the habit of using it after a single boiling, and so far have had no reason to regret it. I have used the gut prepared in this way in about one hundred abdominal sections, in intracranial work, and in what is a more severe test than either, a large amount of skin stitching. In many of the latter cases the dressings were not changed for more than two weeks from the time of the operation, and while a little redness would occasionally occur about a suture, I have had no reason to change a dressing for stitch hole abscess. Where the subcutaneous suture was employed there has been absolutely no trouble, except that now and then, in removing the dressing from an abdominal wound at the end of twelve or fourteen days there will be noticed a little redness with perhaps a slight moisture where the catgut emerges at the end (more commonly the lower) of the wound, where the sebaceous follicles dip deep down into the skin, making disinfection more than ordinarily difficult.

However perfect the sterilization of catgut may become, some operations will always be comparatively unsuccessful with it. One of the causes of their lack of success will be their failure to keep it sterile after it has been sterilized. Carbolic acid is volatile, and a ten per cent. solution becomes, in a carelessly stoppered bottle, a four or two per cent. solution in a very short time. I have seen bottles of what had been well prepared catgut become thoroughly rotten and the oil rancid through a poorly fitting stopper. Then, again, I have seen operators in tying bleeding vessels take a strand of catgut eighteen inches or two feet in length in their hands, the portion of catgut which has been wound about the hand during the tying of one vessel becomes itself tied about the following one. The force required to secure a thorough tying of the first has drawn the catgut strongly through the hand, wiping off, no doubt, some of the organisms which remain there even after a comparatively careful washing. Then, again, I have seen stitch-hole abscesses produced by the use of a needle so small that it left an opening barely large enough for the catgut with which it was threaded to follow in its wake; in its repeated passage though the too small needle holes in the skin, however carefully that skin may have been disinfected, it is almost certain to carry with it many of the organisms with which even the deeper layers of the skin are always charged. This is especially so in those localities in which we find the glands of the skin largely developed.

It has been urged that catgut must always remain an uncertain suture, because in the case of infection the catgut forms a ready path along which the organisms will rapidly travel. During the past year I have seen two cases in which the superficial wound has shown deep infection between the fourth and sixth day. In both of these cases the wound had been closed by a continuous subcutaneous catgut suture. In neither of them did the organisms travel along the line of suture. In neither of them was there any reason to suppose that the catgut more than the tissues favored the growth of the organisms. The catgut retained its strength nine or ten days and then disappeared, having given rise to much less trouble than silk would have done under the same conditions.

The tissue necrosis in these cases, if it spreads at all, takes the course of the denser connecting tissue fibres in the fat, or if the sheath of the rectus be exposed, the course of the fibres of that fascia.

My success with catgut I attribute to thorough sterilization by means of heat and carbolic acid, to preservation of the catgut and carbolized oil by careful bottling, to care in not leaving in a wound any portion of catgut that has been handled, to the use of a needle of such a size as to enable the catgut readily to follow in its track, to thorough drying of the edges of the closed wound, and to the rubbing in, after the stitching of the wound has been completed, of a powder of one part of sterilized powdered iodoform in seven parts of Squibb's impalpable powder of boracic acid. Sprinkling of the wound with this powder is not sufficient.

It must be thoroughly rubbed into the surface of the wound. If the wound receives any subsequent dressing, it is washed first with pure alcohol and the powder applied as before. No aqueous solution of any kind is brought near the wound.

Many of the more recent methods suggested for the preparation of catgut will undoubtedly be found to yield thoroughly sterile catgut, such as Kœonig's sterilization by Cumol, and a modification suggested by Doctors Clark and Miller;that of Dr. George R. Fowler, of boiling in alcohol under pressure, and its modification by Jellet; that of Cunningham with Formaline,and its modification by Hofmeister. All of these methods may be thoroughly reliable, and yet in as much as a man must prepare his own catgut to secure anything like uniformly good results, it is doubtful whether any of these methods will be thought simple enough by the general practitioner to warrant him in adopting it. Whereas the method of boiling in carbolized oil, while it stands the severest tests, both of the laboratory and the hospital ward, requires for its adoption no utensils other than those found in every ordinary kitchen.—Dr. L. M. Sweetnam, in *The Canadian Practitioner*.

Therapeutic Hints.

AN OINTMENT FOR ECZEMA (*Journal des Praticiens*):

℞—Oxide of zinc, ...	1 dram;
Talc, ...	1 dram;
Olive oil, ...	½ ounce
Lime-water, ...	½ ounce;
Lanolin, ...	2½ drams;
Tincture of benzoin, ...	10 minims.

A POWDER FOR CORYZA;

℞—Subnitrate of bismuth, 1 drachm;
Powdered comphor, 10 grains:
Powdered boric acid, 30 grains;
Hydrochlorate of morphine, 1 grain;
Hydrochlorate of cocaine, 1 grain;
Powdered benzoin, 15 grains.

A pinch of this to be snuffed up the nostrils.—*Ther. Gaz.*

REMOVAL OF COAL STRAINS.—For the removal of coal stains from a man's face Dr. Geo. W. Mill (*Denver Med. Times*) anesthetized the patient and with a sharp uterine spoon curette scraped off the discolored skin leaving portions of skin from which the scraped portions were to be recovered. At a latter date the remaining discolored portionswere removed in the same way. He recommends the method also for powder stains.

THE SALICYLATES.—When salicylates in small doses are poorly borne by the stomach it will often be found that a single large dose, administered in milk, before retiring, will be well borne and rapid in effect.—*Phil. Polyclinic.*

CHLOROFORM APHORISMS.—Chloroform may be given as safely as ether if the following rules are adhered to:

The stomach should contain no food, and a very small quantity of liquid.

Place the head a little lower than the trunk:

Permit no tight clothing about the patient:

The anæsthetic should be Squibb's 70 per cent. alcohol, 30 per cent. by volume:

A hypodermic of one-fourth grain morphine with $\frac{1}{150}$ grain atropine should be given a half hour before the anæthetic:

The first inhalation of the vapor should be well diluted with air, and very gradually given.

A teaspoonful of aromatic spirits of ammonia should be given in half an ounce of whiskey or brandy by the stomach:

A starched towel folded in the shape of a cone, the apex open, should be employed, as it allows the air to enter freely:

The pulse and reflex of the eye should be closely watched, and the towel removed from time to time when indicated.—Spootswood, in *Columbus Medical Journal.*

THE PUBLIC SERVICE.

UNITED STATES MARINE HOSPITAL SERVICE.

Sawtelle, H. W., surgeon, to proceed to Atlanta, Ga., for special duty, Sept. 14, 1897.

Carter, H. R., surgeon, to proceed to New Orleans, La., for special duty, Sept. 14, 1897.

Banks, C. E., surgeon, to proceed to Baltimore, Md., for special duty, Sept. 15, 1897.

Glennan, A. H., passed assistant surgeon, to proceed to Mobile, Ala., for special duty, Sept. 15, 1897.

McIntosh, W. P., passed assistant surgeon, to represent service at the meeting of Mississippi Valley Medical Society at Louisville, Ky., in October. Sept. 17, 1897.

To proceed to Memphis, Tenn., and assume tempory command of Service, Sept. 18, 1897.

Guiteras, G. M., passed assistant surgeon, to report to Surgeon H. R. Carter for special duty, Sept. 16, 1897.

Geddings, H. D., passed assistant surgeon, to proceed to Jackson, Miss., for special duty.

Russell, H. C., assistant surgeon, granted 7 days leave of absence from October 15, 1897, Sept. 16, 1897.

THE NAVY.

For the week ending September 25, 1897.

Assistant surgeon H. LaMotte, was placed on the retired list Sept. 15, for physical disability.

Assistant surgeon C. E. Riggs, detached from the New York Navy Yard, Oct. 4, and ordered to the "Newport" Oct. 4.

Passed assistant surgeon J. F. Leys, detached from the "Helena" Sept . 20, and ordered to the "Vesuvius."

Surgeon N. H. Drake, ordered to the "Minneapolis", "Columbia" and other vessels in reserve at League Island, Pa.

Passed assistant surgeon M. F. Gates, detached from the "Minneapolis," on relief, and ordered to the Boston Hospital.

Surgeon G. P. Lumsden, detached from Port Royal, on relief, and ordered to special duty attending officers at Norfolk, Va.

Passed assistant surgeon G. A. Lung, detached from the Boston Hospital, on relief, and ordered to Naval Station, Port Royal, S. C.

Passed assistant surgeon N. S. Guest, detached from the "Vesuvius', and ordered to the "Helena" Sept. 20.

Surgeon F. Rogers, when detached from Boston Navy Yard, ordered home and be ready for sea.

Surgeon H. E. Ames, ordered to the navy yard, Norfolk, Va. Oct. 2.

Assistant surgeon M. S. Elliott, detached from the "Indiana" and ordered to the "Porter."

Miscellaneous Items.

Flowers in the Sick Room.—In the August number of the *Zeitsshrift für Krankenpflege* it is stated that a London hospital physician recently sent a circular to the physicians of all the London hospitals, advising them to keep a sharp eye on the nature and peculiarities of the flowers brought to the sick. If, he said, certain flowers, and especially flowers in a certain condition, were kept in a sick room, they might well exert on the patient an influence which the physician would have to take into account. It is best, he thinks, to limit the bringing of cut flowers into the sick room, for, if their presence itself is not injurious, the water in which they are kept readily collects germs unless it is changed very often, and becomes foul. Cut flowers, he says, should not be kept longer than a day in the sick room, and it is best toallow only those that are in pots. Artificial flowers must be entirely proscribed; they are very dangerous on account of the dust which always clings to them. Flowers should be chosen with reference to their perfume; those of a strong odor should never be allowed in the sick room. On the other hand, the presence of flowers should in no wise be forbidden, for manifestly he sight of a violet or a forget-me-not may have a pronounced good effect on the patient, and garlands and green twigs should always be kept in hospitals, especially twigs of eucalyptus, whic hhave disinfectant properties.—*N. Y. Med. Jour.*

Dr Antonio Quesada, a Uruguay physician, insists on having Dr. Sanarelli's bacillus icteroides tested by being himself inoculated with it. The test will be made in the presence of a few selected physicians who will carefully note the progress of the case.

Dr. Chas. Minor Blackford, Jr., has resigned his position in the Atlanta Medical College to accept the chair of Pathology in the Medical department of the University of Georgia, at Augusta.

The Denver Medical College, according to the Denver Medical Times, has 61 teachers and 51 students, lest than one student to each teacher. The Gross Medical College is better of with 73 students to 49 teachers. Wonder if it pays.

The Ninth Annual Meeting of the Tri-State Medical Society of Alabama, Georgia, and Tennessee will be held at Nashville, Tennessee, October 12th, 13th, and 14th, 1897. Railroads will give reduced rates to the Tennessee Centennial. This meeting promises to be the largest and most successful ever held by the Society. Titles of papers should be sent to the President, W. F. Westmoreland, M. D. Atlanta, Ga. The Committee on Arrangements has secured the auditorium of the "Tulane" for the meeting which promises to be the largest gathering in the history of the society.

The Alabama Medical and Surgical Age has been removed from Anniston, Ala., to Birmingham, Ala. The Age will be under the same management as it has been for the past nine years.

Dr. J. Howell Way, of Waynesville, has been tendered and has accepted the appointment of Surgeon Gen'l of North Carolina Division United Sons of Confederate Veterans.

THE TOAD AND THE SALAMANDER AS DRUGS.—Hewlett (*Ccience Progress*) shows that the old practice of prescribing preparations of the toad as remedies for dropsy was not so absurd as might at first appear, for, as he has shown, a substance is secreted by the toad's skin that is very like digitalin, and hence may have a favorable effect in cases of cardiac dropsy. It would appear that the active principles of the venoms of the toad and salamander are totally different substances from those of snake venom, the former being alkaloidal, while the latter are proteid in nature. Couriously enough, the venom of the toad and salamander is fatal to the animal which secretes it only in comparatively large amounts. The salamander appears to be remarkably refractory to certain poisions; it is only completely "curarized" by forty-three milligrammes of curare, while morphine is apparently quite inactive. It has been demonstrated by actual experiment that the salamander's blood and blood serum act as an antitoxine toward curare. The article seems to show that the belief of the ancients in the venomous nature of the toad and salamander was not altogether devoid of foundation.

A CENTENARIAN--The Raleigh *Times* is authority for the report that there is living in Raleigh, N. C. a negro, Austin Devereux, who is 106 years old.

Dr. J. W. P.'Smithwick, Aurora, N. C., desires to sell his lucrative practice and drugstore.

Dr. Walter Peyre Porcher, of Charleston, S. C., was married on September 29th to Miss Mary Long Porcher, at Minneapolis, Minn.

Cards have been issued for the marriage October 12th, of Dr. Edgar Reid Russell, and Miss Fannie Marler, both of Hickory, N. C.

CHARLOTTE MEDICAL AND SURGICAL INSTITUTE.—A modern hospital for the treatment of private cases, under the above name, has been established in Charlotte, N. C., with the following staff: John R. Irwin, M. D. [C. A. Misenheimer, M. D., Robt. L. Gibbon, M. D., W. H. Wakefield, M. D.

We learn that a private sanitarium will be opened in Salisbury, by Drs. John Whitehead and J. W. Long.

The Pope evidently knows what is good concerning eating he writes: "Pay attention before all to cleanliness, that the table appointments are spotless, glass bright, napery immaculate, that from the cellar comes the purest wine of the Albanian Hills, which exhilarates the spirit and drives away trouble; but do not trust Bacchus, so do not be sparing in diluting wine with water; obtain from healthy grain well cooked bread, eat sparingly of chicken, lamb, and beef which are most nourishing to the body; meat should be tender without abundant sauces or root vegetables, which spoil it; fresh fruits are excellent whether raw or slightly cooked; an abundant quantity of foaming milk, it nourishes infants and assists old age; also honey, celestial gift, but this Ibleo nectar (from Mount Ibla in Sicily) use frugally; add to this the sweet herbs and fresh vegetables that the garden supplies; add ripe fruit according to season, and especially tender apples, which with their pink tints brighten the banquet; lastly comes the drink, which in hard seeds fertile Moka sends you, softly sipping the black liquor that comforts the heart."

BACTERIOLOGY NOT SIMPLE.—There are a large number of "bacteriologists," many of whom are specialists who have entirely dissociated bacteriology from pathology. physiology, chemistry and botany. It requires comparatively, little skill and study to be a "bacteriologist," and probably more incomplete and unsound work is published on bacteriology than in any other science. It is so easy to create a sensation with bacteria, especially where disease, or the prevention of disease is concerned.

Many bacteriologists, unfortunately are quite satisfied with performing a few laboratory experiments without at the same time studying the disease itself, and they argue only too often from immature observations. They are even criticizing without being critical. In the study of disease bacteriology cannot and must not be severed from pathology and clinical medicine or surgery. This should be insisted upon, because recently an attempt has been made to have bacteriology recognized as a separate branch of the medical curriculum, with compulsory attendance and the inevitable examination at the end, without which there is no perfection. The principles of bacteriology must of course be taught with biology, pathology, clinical medicine, and surgery, but the art and practice of bacteriology can only be taught by carefully-conducted courses extending over some weeks or months.

The average student acquires a smattering of practical bacteriology which is worse than useless, and this encourages him in the idea that bacteriology is quite simple and mere child's play. —*Nature.—Medical Age.*

NECROLOGY.

Dr. Victor McBrayer, aged 46 years, at Shelby, N. C., September 19, 1897.

Dr. Samuel J. Blackwell, aged 64 years, at Ebenezer, S. C. September 5, 1897.

Dr. James F. Simpson, aged 78 years, a retired physician of Pender County, at his home in Point Caswell, September 28.

We regret very much the unaccountable mistake which occurred in the last issue of the JOURNAL under the head of Necrology in announcing the death of Dr. George Ben Johnston, of Virginia. Dr. Johnston, we are pleased to state, is in excellent health and none the worse for the premature burial he suffered.

Reading Notices.

SPURIOUS COCA WINES—The *British Medical Journal*, in its issue for January 23d and again in that for February 6th, speaks of the dangers that attend the popular use of so-called coca wine—that is, some kind of wine in which a salt of cocaine is dissolved. For the most part, the wine is of poor quality, but sweetened and highly fortified with rectified spirit. The amount of cocaine contained in many of these products is variable, too, and in prescribing them one really does not know what doses of that drug he is ordering. Moreover, the contention seems reasonable that the tonic and stimulent virtues of a real wine of coca—such, for example, as the well known Vin Mariani—do not depend altogether upon the cocaine in it.—*New York Medical Journal, March 20, 1897.*

THE SUPERIORITY OF SUGAR-COATED PILLS.—"Warner" is demonstrated by a wealth of evidence. There is accumulated evidence of perfect results obtained by the Medical profession which has used them for over forty years. There is evidence in the award granted by the Columbian Exposition, 1863, upon the following grounds.—"The pills are of uniform size, the coating is perfect and protects the pills indefinitely, samples 27 years old being shown readily soluble in hot or cold water." A soft pill mass protected indefinitely from atmospheric conditions is certainly the perfection of pill making. There is evidence to be found every day by suspending a Warner pill on a mosquito netting in water from 98° to 100° and watching it dissolve. This test is conclusive as the conditions most nearly approach the natural conditions present in pill medication. It will show the superior solubility of the Warner product over pills made by any other process. It will guide the pharmacist in his specifications.—*Monthly Retrospect of Medicine,*

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The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; hence the preparation is of great value in the treatment of mental and nervous affections. From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, finds that **no two of them are identical**, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, **in the property of retaining the strychnine in solution**, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. **Fellows.**"

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear, can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

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Original Communications.

A CASE OF POISONING FROM THE BITE OF A BLACK SPIDER.

By THOS. M. RIDDICK, M. D., Woodville, N. C.

NOT long since I was called hurriedly to see a case. When I saw patient I elicited this history: Mr., R. æt 40, was taking off fodder in field, late in evening. Suddenly he felt a keen lancinating bite, a little above ankle joint. Before he could examine into cause, the bite was repeated, with much pain to him. While raising leg of pants, so as to expose the offender, he noticed a spider escape from top of his stocking. The spider was black, shaped somewhat after the form of a dirt dauber, and had a red spot on body. What his peculiar entomological cognomen is I do not know.

Immediately after receiving bite patient stated that he felt a sharp stinging pain extend up his leg, then into his groin, from whence it extended farther into spine. He was rendered unable to continue his work, and at once sought his home and sent for medical aid.

When I saw him he was suffering intensely. His pain was agonizing, his cries distressing. His legs and arms were cramped. The spine was arched—opisthotonos. The abdominal muscles were hard, tense, resistant. Patient complained of griping pain in stomach, and said that spine felt as if it was breaking in two. There was localization of acute pain in wrist and ankle joints.

Dysuria and nephritic inaction were marked. Pulse quick and thready, temperature 102°.

The systemic contamination was complete. Patient was greatly excited and alarmed, and filled with grave apprehension of impending death.

I immediately ligated limit, above bite, excised a goodly portion of tissue about wound, and cauterized freely with carbolic acid. Had this been done immediately after receiving the injury, the subsequent pain and symptoms might have been mitigated, at least, if not averted.

Not knowing the specific character of the poison with which the sufferer had been inoculated, I could not of course know what antidote to administer in order to antagonize its baneful action, so had to manage the case on general therapeutic principles.

To free the system of the venom, through the emunctories, at the earliest hour, was the objective point. As the pulse was profoundly depressed, due in part to fright and shock of patient, I administered strychnia nitrate, and tinct. digitalis at once, to control the cardiac depression. Together with this, I gave generous draught of apple brandy (there was no whiskey obtainable) in hot water through the night, for both its stimulant, diuretic, and diaphoretic effect. Morphia, with atropine, was given by syringe, to relieve pain, and a grain and a fourth was taken within three hours, before its anodyne effect was apparent. Even that produced no somnolence, the excitement of the patient being such as to neutralize its soporific and tranquilizing action upon the nervous system.

To hasten the elimination of the poison, I put patient into a sweat jacket, made by placing steaming bricks, well wrapped, down each side of him, and then wrapped his body, bricks and all, with a blanket wrung out of water as hot as he could bear. The diaphoresis was copious and thorough. The bowels were opened with elaterium. Every three hours a diuretic mixture of potassium acetate, fld. ext. buchu, and spts. nitre, was given to goad the kidneys in the work of elimination. At one time there were muscular twitchings, rather suggestive of impending convulsions, but they were kept in abeyance by potassium bromide gr. xxx, every hour until that symptom disappeared.

Under this heroic regimen the alarming features were much modified after a lapse of six hours. Another quarter grain of morphia was given during that time—the pain making it compulsory.

The day following potassium bromide and hyoscine were administered to control the nervous excitability that was incident to reaction, with one eighth grain of morphia, three times a day, to allay some lingering pain in spine. For three days these modified pains continued, which I at once attributed to some irritation of the cord, or its covering, from the poison. Fearing meningeal inflammation, as a resultant possibility, I produced counter irritation down the spine, and put patient on potassium iodide, gr. x, three times a day, in milk. Its action was effective and happy, and the recovery progressive and uneventful.

Selected Papers.

USES OF NORMAL SALINE SOLUTIONS IN OBSTETRICS.

By. C. S. Bacon, M. D.,
Professor of Obstetrics, Chicago Polyclinic.

THE hypodermic injection of normal saline solutions is indicated in obstetric practise in cases of ante-partum and post-partum hemorrhage, in hemorrhage from rupture of the sac in extra-uterine pregnancy, in cases of puerperal eclampsia, and in cases of puerperal infection. This valuable therapeutic agent is in less general use than it should be, partly because many physicians are ignorant or forgetful of its worth, and partly because of insufficient acquaintance with the simple technique necessary for its use. It has been employed in cases of hemorrhage for some time, and its mode of action is more or less well known. Its use in eclampsia is quite recent and its method of action is not well understood. The same may be said of its recent employment in cases of puerperal infection.

I propose to consider briefly the mode of action of this agent in each of these conditions, and then demonstrate a simple apparatus by which the injection may be safely given.

The effects of a sudden hemorrhage are immediate and secondary, both of which depend upon the amount of blood lost. The immediate effects of a sudden considerable hemorrage are those due to the somewhat indefinite phenomèn that we call shock, and those due to the disturbed circulation which results from the lack of sufficient blood in the vessels to enable the heart to maintain a fair blood pressure. This disturbed circulation may cause a capillary stasis in important regions of the body—such as the nerve centers—and may result in the veins furnishing the heart with so little blood that it has nothing to contract on. When the immediate effect of hemorrhage is not death, in case the hemorrhage be limited in amount, the patient gradually recovers from shock and the quantity of circulating fluid is to a certain extent restored by the transudation of the serum in the lymph spaces and the oligemia changes to oligocythemia. The rapidity of recovery from this condition varies with the amount of blood lost and the activity of the blood-forming organs. When hemorrhage begins gradually shock may be lacking, but there soon comes the effect of a disturbed circulation due to the diminution in the quantity of the circulating medium. In any case one of the most important causes of the immediate serious symptoms resulting from hemorrhage is the diminution in the amount of the circulating fluid rather than the changes in its quality.

While it was formerly hoped that all therapeutic indications might be met by the introduction of blood from without, yet the difficulties and dangers of such a procedure have been found so great that it has been entirely superseded by the use of a normal salt solution. Transfusion of blood from the lower animals was first suggested and employed, but it was soon fonnd that the foreign corpuscular element did not live in the human body and became a source of great danger to it. Then transfusion of blood from another individual was adopted, but rejected because of the difficulty of getting a supply of blood, the danger of its being impure, the danger of clotting, and of the introduction of air. The next step was the intravenous injection of defibrinized blood. This has proved but slightly dangerous, and is also difficult or impossible in private practise. Numerous investigations were then made to determine the value and practicability of introducing the normal salt solution. These have resulted in establishing the fact before stated that the urgent and most important indication in serious hemorrhage is to secure the proper quantity of circulating medium, and that this can be done with safety by the use of the normal salt solution.

It is convenient to divide hemorrhages into three classes according to the amount of blood lost: Hemorrhage of the first degree, when less than one-fourth of the blood in the body is lost; hemorrhage of the second degree, when from one-fourth to one-half of the blood is lost; and hemorrhage of the third degree, when more than one-half of the blood is lost. As the blood comprises about one-thirteenth of the body weight, a woman weighing 130 pound has about ten pounds of blood. In such a woman a hemorrhage of the first degree is one of less than two and a half pounds, of the second degree from two and a half to five pounds, and of the third degree of more than five pounds. In practice the physician must be satisfied as a rule with an approximate estimate of the quantity of blood lost, because of its admixture with the liquor amnii and the general lack of facilities for weighing. As an assistance to estimating it may be stated that an ordinary sheet will hold one and a half to two pounds of blood when saturated. When the amount of blood lost is less than one-fourth the amount of blood in the body, the vessels contract so that the blood pressure remains approximately unchanged. Hence if there be no shock the symptoms are transient and the patient recovers very rapidly. In the last class of cases the symptoms are very serious and the patient generally dies unless very prompt and efficient help be given. In the second class, which comprises a majority of the serious cases in obstetric practise, the importance of efficient therapeutic aid is very great, and the most important indication is that before given—to increase the amount of fluid to carry on the normal circulation. The saline solution may be introduced into the body by intravenous injection, by injection into the peritoneal cavity, and also by way of the alimentary canal, as well as by hypodermic injection. The use of salt solution or of any liquid in considerable quantity by the mouth is often impossible, sometimes on account of the unconscious condition of the patient and at other times because of nausea or the danger of exciting vomiting. The rectal injection of a warm salt solution is valuable, and in hemorrhage of the first degree sufficient. But in more serious hemorrhage the slowness and uncertainty of absorption render the method too unreliable. The objections to the injection of the solution into a vein are the difficulties of the operation, and the danger from a solution that is not sterile or from the introduction of air. Besides, there may be danger from overfilling of the vascular system—which cannot arise in case of a hypodermic injection; if an excess be injected it simply remains unabsorbed outside of the blood-vessels. The injection into the peritoneal cavity (which has been recommended and practised somewhat in cases of cholera) is certainly more dangerous on account of the posibility of injurying the intestine and the risk of infection. Hence there remains the hypodermic route, which has proved to be free from danger and easily and successfully employed.

While there is much uncertainty concerning the pathology of eclampsia, yet investigators, following the line laid down by Bouchard in his study of autointoxication, have established certain facts very suggestive from a therapeutic standpoint. It has been determined that the toxicity of the blood-serum of eclamptic women is considerably increased. While on the average ten cubic centimeters of serum from normal blood will kill a guinea-pig weighing one kilogramme, from three to six cubic centimeters of serum from the blood of an eclamptic woman is equally toxic. The nature of the toxic element is in dispute. It may be carbamic acid, or some insufficient nitrogenized compound, or a placental or fetal product, or it may be an increase in fibrinogen, which in excessive amount is toxic. But whatever its nature it is not excreted rapidly enough by the kidneys and other excretory organs. This definitely established fact gives an important therapeutic indication, namely, removal or dilution of the toxic element. This indication has hitherto been met as a rule by increasing the excretions, but this method of relief is slow. Venesection, which was formerly in general use in this disease, and is still relied upon by older practitioners, effects rapid removal of the toxic blood. At first the total quantity of blood is diminished, and with this withdrawal of blood there is a proportional diminution in the amount of toxic elements. When the original quantity of blood in the vascular system is again secured by absorption of serum or transudation from the lymph spaces there results dilution of the poison. The same rapid dilution of the poison can be obtained by combining venesection with injection of a normal saline solution. The favorable results which might be expected from substituting a pure diluent for from one-tenth to one-fifth of the poisonous blood are obtained in praetise. In addition to its diluent function, the salt solution is also a valuable diuretic, diaphoretic and purgative. These latter properties are of chief importance when the saline solution is used alone without previous withdrawal of blood, as has been practised by some. If the patient be anemic this is the procedure to be recommended. In a strong, apparently full-blooded patient combined venesection and injection promises the best results.

In the treatment of puerperal fever there has been practically no progress for the last three decades, despite the very valuable discoveries concerning its nature and prevention. The hopes first held out by the antiseptic treatment of puerperal infection have not been realized, and more exact knowledge of its nature has shown the reasons for this dissappointment. The rapid penetration of the pathogenic bacteria into the uterine substance makes any topical application to the surface useless. In this discouraging state of therapeusis several new procedures have been proposed, among which is the injection of normal saline solution. The theory of its mode of action is based upon the hypothesis that the symptoms of infection are due to hemic intoxication with bacterial toxins, and that these toxins are diluted and their excretion favored by the normal salt solution, just as the eclamptic poison is diluted and eliminated by the same agent. According to this hypothesis the injection would be of value in toxemia rather than septicemia or bactericemia. While a number of cases have been reported which were apparently benefited by this procedure, they are too few to prove anything, and I merely call attention to the possibilities of the procedure.

Having thus very briefly considered the three indications for hypodermic injection of salt solution, I will now describe its technique and the very simple apparatus I use. I shall first consider the preparation of the solution and the method of injection. The normal salt solution (one that will not injure the blood corpuscles) is generally stated to have the composition of 9 parts of sodium chloride to 1000 of distilled water. This is the normal solution for animals generally experimented on. But it has been found that for man the proportion should be about 8 per 1000. In private practise, whose exigencies I have constantly in mind, it is practically impossible to secure an exact solution, since the physician does not usually carry scales with him. A sufficiently accurate approximation may be made by taking for a pint of water the amount of fine table salt that is held by a teaspoon of medium size, when the salt is taken up loosely without shaking it down, and the excess is stricken off with a straight-edge. The solution should first be made and then boiled to render it sterile. The containing vessel is then surrounded with ice or running water from hydrant to cool it off. The temperature of the solution should be about 98°, but a variation of 2° or 3° will do no harm. The heat sense of the skin will ordinarily be a sufficient accurate test if determined by pouring drops on the back of the hand. If the fever thermometer be used it should be thoroughly disinfected with an antiseptic solution.

For injection the principle of the gravity syringe is by far the simplest and best. In the apparatus which I use the reservoir consists of a can or bottle of enameled ware, with a spout from from the side at the bottom. To this spout a rubber tube about three feet long closed with a clamp is attached. Into the other end of this tube a hypodermic needle may be inserted. In order to introduce the solution into two places at once I use a glass Y, to the stem of which the tube from the bottle is attached, and to each branch smaller tubes carrying needles.* To sterilize this apparatus all the parts, including the tubes must be boiled. It the tubes have not come in contact with septic matter it is sufficient to run through them an antiseptic solution followed by plenty of sterile water. The solution is poured into the reservoir and allowed to fill the tubes and needles. As the woman is always lying on her back I find the inside of the thigh the most convenient place for injection. The skin is well washed, the needles introduced, and the reservoir raised sufficiently to secure the necessary pressure. Constant massage is made to assist in absorption of the solution. In this way from twenty-four to thirty-two ounces may be injected in fifteen minutes. There is generally but little pain, the only complaint coming from the puncture of the needles. The effects are immediate. Faintness and thirst disappear, and the other symptoms gradually subside.

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*The entire apparatus is put up for me by Sharp & Smith of Chicago in a very compact little case, and is an indespensable part of an obstetric outfit.

I am generally satisfied with the use of one quart at a time. In one to two hours more may be used if indicated. I have given three quarts in twelve hours with excellent results. In eclampsia a quart may be injected after the withdrawal of a pint of blood.—*Medicine.*

BLOODLETTING AS A THERAPEUTIC MEASURE.

By C. A. Murray, M. D., Van Etten, N. Y.

THE subject of bloodletting is probably at present the most unpopular theme known to the profession. It used to be the scrapeboat upon whose head was heaped all our sins. It is that great mogul of which Prof. Reid has said: "Less slaughter I am convinced has been effected by the sword than by the lancet, that minute instrument of mighty mischief."

We need not be told that this is one of the most potent agents which the physician has to wield in the treatment of disease. It is potent for good and for evil. It may save life or it may destroy it. It is, therefore, obvious that the conscientious practitioner should be fully informed in regard to the effects and even remote consequences of venesection as a therapeutic agent. It is all the more necessary that this subject should be carefully investigated, as there is much reason to fear great mischief has been done in former years by its indiscriminate use.

The first obvious effect of bloodletting is the diminution of the actual quantity of blood circulating in the system. The second effect is impoverishing the quality of that blood; for immediately after a bleeding the blood vessels absorb watery fluid from every part of the system to compensate for their depleted condition and thus the blood is rendered more watery, less rich and less stimulating to the heart and arteries.

Another effect is to diminish the activity of the circulation. The vessels being less full, contract less powerfully upon their diminished contents and thus the pulse, that great index of the heart's action, becomes smaller. Less blood and of a less stimulating quality is sent to the capillaries and their action is diminished. The evidence of this is seen in the paleness which ensues after a bleeding and the same is true of every part of the system.

These, then, are the two effects produced on the vascular system by bloodletting—lessening the quantity and impoverishing the quality of the blood and as a consequence impairing the action of the heart and arteries. He, therefore, who would have his heart and brain fed with rich blood should avoid the use of the lancet. The energy of the brain depends upon the stimulus it receives from the arterial blood flowing through its substance. It is evident that whatever deranges the circulation must also derange the condition of the brain. Many physiologists claim that the actual quantity of blood in the brain is generally very much the same. It is mainly therefore, the alteration in the composition of the blood that effects the brain. The condition of the circulation also affects it. For example, though the quantity of blood in the brain may not vary much, yet the quantity circulating through it in a given period may vary greatly according to the frequency of the contractions of the heart; so, also, may the power or momentum with which the blood is driven by the heart to the brain, and in both these ways may the energy of the brain be impaired.

Now, as already stated, bloodletting impairs the action of the heart. The circulation becomes slower and the force with which it is driven to distant parts is lessened. The brain participates in this general effect. The blood is driven less forcibly to this organ and the quantity circulating through it in a given time is less. The result is, the energy of the brain is impaired. Accordingly giddiness, sickness at the stomach, and even fainting comes on. Also, many outward circumstances modify the effect of bloodletting, for instance, age; children, when bled to faintness, recover slowly, and this condition is not unattended with danger of convulsions and even death. Great caution, therefore, is necessary in bleeding children. From twenty to fifty years man is in his greatest vigor and it is during this period that the loss of blood can best be borne. In old age the action of the heart is impaired. The circulation becomes slower and the general powers fail, so that under the loss of blood reaction does not so readily take place, and if the quantity be large, great prostration will follow. Great caution here is recommended.

Again, females, owing to the delicacy of their constitutions, do not bear the loss of blood as well as males. There are three epochs or periods in their lives which require attention in this relation—namely, menstruation, pregnancy and the period following the cessation of the menses. The influence of menstruation is so slight it need scarcely be noticed when considering the propriety of bloodletting. During pregnancy, however, loss of blood is better borne than in the natural condition and larger quantities are required to be abstracted to subdue disease. After the cessation of the menses, the natural tendency is to become plethoric. This is the natural consequence of the suspension of physiologic discharge. Hence, at this period, diseases indicative of this condition are more common, such as apoplexy, paralysis, hemoptysis, scirrhus and many other maladies. Therefore venesection at this peroid is well borne.

Besides these constitutional pecularities, others equally important result from habits and mode of life. A person bred to habits of industry and temperence, and along with these, enjoying the benefit of wholesome food, pure country air and, above all, a mind free from care and depressing passions, will bear venesection incomparably better than one whose constitution is undermined and whose vital energies are wasted by the unavoidable deprivations to which the poor are subjecs, or by the voluntary excesses, debauchery and intemperance of the rich. With regard to the use of the lancet in persons who have long been addicted to habits of intemperance great caution is necessary. In fact, I believe its use in such cases should be almost entirely interdicted. Dr. Watson (you will preceive we have to go back a good way to get authority on bloodletting) lays great stress on the buffy coat of the blood drawn as indicating to some extent the height of the inflammation and hence the propriety of the bleeding. When the inflammation is high the blood drawn is frequently both buffed and cupped. Now I have shown that bloodletting reduces the quantity of the blood and impoverishes its quality and said, he who would have his heart and brain fed with rich blood should avoid the lancet. You will remember when the great Roman general, Regulus, was taken prisoner by the Carthagenians, he was offered the ransom of his life on what he considered dishonorable terms and when asked why he did not accept, he told them he was a Roman, and he further said to those inferior Carthagenians, "if the bright blood which feeds my heart was like the slimy scum which stagnates in your veins, I should, doubtless, accept your ignoble terms and save my life." I quote this merely to show the value placed upon rich blood by all enlightened people.

But I come now to show you when this richness becomes excessive. When the blood becomes loaded with this inflammatory product, this buffy coat, this plasma, this organising matter, this coagulable lymph, which causes the pleura to adhere, the lungs to be filled with hepatisation, the trachea with fibrous false membrane, excessive inflammatory disease is present, and the surest, quickest and best way to reduce the blood to the standard of health is to use the lancet, which is the powerful means in our possession to reduce the pulse. I acknowledge hypodermatic injection of veratrum viride, morphia and other sedations may reduce the inflammation somewhat, yet these remedies obscure the symptoms and are not so rapid, so sure and reliable as bleeding.

Dr. Marshall Hall, many years ago, gave us a classification of diseases with reference to their ability to bear the loss of blood, which I have considered so able and so scientific that I have always followed it and have never had occasion to regret it. First, he classes congestion of the head and a tendency to apoplexy. These diseases, according to his classification, bear bloodletting best of all. Second comes inflammation of serous membranes, as of the pleura, peritoneum and the like. Then follows a long list of diseases not necessary to enumerate.

The first case to which I call your attention is one of puerperal eclampsia, which disease I believe to be a species of apoplexy and consequently coming under Dr. Marshall Hall's first classification hence bearing bloodletting best of all.

Case I.—Mrs. K., living near Spencer Village, was taken in convulsions after confinement, the second day. The attending physician called counsel with no beneficial results. The third day I was called alone to see the patient and found a case of profound coma, occasionally interrupted by a violent convulsion, accompanied by frothing at the mouth and opisthotonos. I found the pulse hard and full, which is generally characteristic of this disease. My resolve was instantly taken. I fortified myself by showing the utter hopelessness of the case in its present condition and proceeded to bleed in a recumbent posture, to actual syncope.

Fearing the bleeding had been excessive, I immediately gave her the benefit of position by allowing her head to hang off the the bed, supported by an assistant, so that the blood might gravitate to the brain and thus support the heart by nervous influence, and not until a full half hour had elapsed was the volume of pulse sufficiently restored to allow the replacing of the head upon the pillow. In about an hour more she was seized with another convulsion. Thoroughly discouraged, I thought there was no hope and left the patient, promising to call again next morning. I failed to appreciate the fact that her brain had been under this terrible blood pressure two whole days and could not be expected to be immediately relieved. The next morning I was surprised to find the coma entirely gone, patient conscious, knew me, could talk, ultimately made a good recovery and I believe is alive today, though this happened about thirty years ago. I thought at the time the bleeding had been slightly excessive. I was, however, afterwards convinced that less bleeding would not have saved the patient. We must have sufficient blood to relieve the brain.

Case II.—About ten years ago I was called early one morning to see Mrs. K., living about seven miles from Van Ettenville, and found her in convulsions at about the seventh month of utero gestation, in her first pregnancy. Dr. Dumond of West Danby, was called as counsel. I suggested bleeding, according to my custom, to which he gladly gave his assent, considering her case almost hopeless. She was accordingly bled about eighteen ounces, a large bleeding for a slender woman of eighteen years. The bleeding stopped the convulsions and relaxed the os uteri to such an extent that we succeeded in about eight hours in delivering her of a seven months' fetus, which lived about five hours. A remarkable symptom in this case was the total blindness which existed—a symptom which I believe commonly exists in eclampsia, but is frequently overlooked because the patient in her unconscious condition is unable to tell us she cannot see. We were thoroughly discouraged by this symptom, but kept her quiet and found next morning that her brain had cleared, sight was restored and that she was conscious. She made a good recovery. This case was considered the more remarkable from the fact that three other cases of this disease had happened in that vicinity which failed to be bled and all three died.

Case III.—About five years ago I was called in the night to see Mrs. W., living about four miles from Van Ettenville, but on account of the darkness of the night and snow, I was unable to see her until daylight and then only by a circuitous route. I found her in the seventh month of pregnancy; primapara; had been in convulsions about eight hours. I immediately bled her largely, after which the convulsions were milder. I called Dr. Gee in counsel, who, like myself, could see no hope. I, however, remained with her and during the next night succeeded in delivering her of a dead fetus, but on account of the extreme prostration, dared make no attempt to accomplish the third stage of labor, which delayed for some hours. Unconsciousness continued. Yet this lady in her extremity insisted on getting well and did so. She made a good recovery and two years later was delivered of a healthy boy.

It may be interesting to note that this woman had another attack of eclampsia at this, her second confinement. After the labor was fully accomplished she had one terrible convulsion. But, profiting by my former experience with her, I bled her so quickly and freely that she didn't have another, but made a good recovery. A remarkable feature in this case was loss of voice. It was three days before she uttered the first articulate sound.

You will, therefore, perceive, while most severe cases of puerperal eclampsia die, I attribute the success I have had in the treatment of these cases to free bleeding. I believe there is no other rational treatment. Some physicians place great reliance upon hypodermic injections of veratum viride, and justly so. Yet I believe this remedy does not clear the brain equal to bleeding and in large doses is equally debilitating and dangerous. Many practitioners claim its action is very uncertain and unreliable. Not that I would bleed in all cases of puerperal eclampsia or apoplexy. Far from it; I would never think of bleeding in such cases unless the pulse warranted it.

This leads me to speak of the pulse. To be a good judge of pulse requires great tact, experience and discrimination. Many kinds of pulse are described by authors for the guidance of students; more, perhaps, than are practically necessary. From this mass I have culled a few which I think should be critically studied by every student who aspires to be even a fair judge of pulse, as follows: frequent or infrequent, quick or slow, strong or weak, full or small, hard or soft, regular or irregular, oppresed or free. The mere frequency of the pulse can be determined by the watch. All else, as you preceive, is the result of feeling and sensation. So, while seeing is believing, feeling is the naked truth. One can soon learn to discriminate between a quick pulse and a frequent pulse, and so of others. The oppressed pulse is perhaps the most peculiar. This pulse at first seems weak and small, but becomes fuller and stronger by depletion. Its indications of disease, carefully studied are very instructive.

To acquire this skill in judging of pulse we should educate ourselves, especially our fingers, cultivate that learned touch, that tactus eruditus, so that we may know to a certainty whether a given pulse will bear bleeding. This skill was possessed by our fathers in exquisite perfection, when bleeding was more in vogue than at present, and should bleeding continue to fall into disuse I think there is reason to fear we shall not qualify ourselver as thoroughly upon this point as they did.

You will preceive this knowledge is more necessary when I state the fact that two eminent professors were once found disputing sharply whether a certain pulse was hard or soft: such disputes ought not to occur among educated physicians. This judgment of pulse is equally necessary in cases which do not require bleeding, as it is an unerring guide to our treatment and tells us whether in a given case we ought to administer tonics and stimulants or sedatives and depressants.

The second classification of Dr. Marshall Hall, *i. e.*, bleeding in inflammation of serous membranes, reminds me of a circumstance which occurred when I was a student of medicine. My preceptor, Dr. C. C. Cook, of Newfield, was called to the adjoining town of Enfield to visit a patient that had been treated by a notorious quack of that town who called himself Dr. Woodruff. (We had no legal protection against quacks in those days). He had treated this patient, as he thought, thoroughly and had given him large doses of his favorite cathartic, which he called "scratch about," but without result. Dr. Cook on examination found a case of acute peritonitis, abdomen distended and very tender. He placed his educated fingers upon the wrist and detected the kind of a pulse calling for the lancet. He immediately bled this patient to faintness; the moment he fainted the inflammatory spasm of the peritoneum was relaxed and the action of the bowels was terrible, the result, no doubt, of the large doses of "scratch about" he had taken and which the bleeding had set free. "There," said my preceptor, "Dr. Woodruff, clean up your patient, take good care of him and he will get well," which he did. This principle of relaxing inflammatory spasm of the peritoneum by bleeding to faintness was well understood at that time, was freely practised and was not then considered dangerous. The physician today who wields the lancet must have exquisite judgment regarding its use. We well know that when blood is once drawn from the veins it cannot be replaced and the terrible prostration which follows may be fatal; hence prudent physicians hesitate and fear to take the responsibility. Therefore, while we deplete with one hand, we must be ready many times with the other to build up with powerful stimulants and tonics. Just why this so, more than of old, the most scientific cannot tell; nevertheless the fact remains.

I will state here I have seen results equally remarkable from bleeding in cases of acute pleurisy, also in pneumonias of forty-five years ago and which were saved by bleeding; by the treatment which would probably prove fatal in most cases at this time.

And now these facts are before us the question arises, shall we entirely discard from our list of remedies this potent agent for controlling disease and thus probably sacrifice many valuable lives, or shall we educate ourselves, especially our fingers, to distinguish by the pulse, cases that require bleeding? I deplore the total decline of bloodletting. I believe the physician who, through fear, fails to bleed his patient when necessary, does not accomplish his whole duty. That the fact bloodletting in former years has been largely overdone is no excuse for its total suppression today. I am, therefore, one of the few who believe there are occasional cases, even in this age of debility and neuralgias, of nervous diseases and typhoid conditions, in which bleeding is not only beneficial, but absolutely necessary.—*Buffalo Medical Journal.*

BIMANUAL PRESSURE IN TEDIOUS LABORS.—Dr. R. G. Woodworth(*Amer. Gynæcol. and Obstet. Jour.*) enters a plea for the use of bimanual pressure in tedious labors instead of the forceps. There are two points which should be considered before thinking of employing the pressure. The first is, are the contractions sufficiently strong of themselves to expel the fœtus? Secondly, is the tenderness of the womb so great as not to admit of pressure? Both of these questions can be decided upon a very casual and superficial examination. When the uterine pains, after dilatation of the cervix, become expulsive, observe, from time to time, whether any progress is being made, and if so, well and good; but after a given length of time, if the fœtus fails to advance and seems apparently to be lodged, do not hesitate to use the pressure. How is the pressure applied? Sit at the side of the patient with a good-sized pillow on the opposite side of the patient upon which to rest the elbow. The arm resting on the pillow, of course, is more or less fixed. The other arm, if it be the right (which is usually the case) can easily be aided by being pressed upon by the right knee. By this powerful means of applying bimanual pressure sufficient force can be brought to bear upon the womb during contraction as shall be immediately apparent in effecting the progress of delivery. It is plain that only sufficient force should be employed as to accomplish the desired end, namely, slight progress. The pressure should be employed only during the contractions of the womb, and a weak and inefficient contraction, augmented by pressure, can be made to accomplish a mighty work in hastening delivery.

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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All communications, either of a literary or business nature, should be addressed to, and any remittances by P. O. Order, Draft or Registered Letter, made payable to ROBERT D. JEWETT, M.D., P. O. Drawer 825, Wilmington, N. C.

Editorial.

YELLOW FEVER.

At the time we write the outbreak of yellow fever in the Gulf region has not assumed alarming proportions. The health authorities, national and local, are using every effort to prevent the spread of the disease, and they have been favored by the lateness of the season and the mildness of the epidemic. Where the number of cases has been at all large the mortality has not exceeded fifteen or sixteen per cent. and in some of the towns has been less than ten per cent. The fact that the disease appeared first at a summer resort is the reason for its being scattered so widely, as it was carried directly from the resort to various quarters of the country by visitors returning to their homes. Many infected persons had left for their homes before the nature of the disease was determined, riding in railroad coaches with other passengers and after reaching home coming in contact with other persons until sick enough to take their beds.

As light as this outbreak is, it will have cost, ere it is checked, the lives of hundreds of useful citizens, and millions of dollars through the necessity for maintaing quarantines and the check to business, and should serve as an additional incentive to the perfecting of state boards of health. It is estimated that the cost of quarantine to the states affected will exceed $500,000, while the loss to the city of New Orleans from the loss of business is placed at $25,000,000, and to Mobile at $2, 500,000.

Especial care should be used in keeping resorts free from contagious diseases of all kinds, and, in the event of its appearance in preventing the dispersing of the visitors until certain they do not carry the infection with them. The close contact of people from any and everywhere at summer resorts, and the general lack of sanitary vigilance, which is the rule at such places, make themvery dangerous distributing points of contagious diseases.

THE ADULTERATION OF FOODS AND DRUGS.

The laws of some states are very stringent concerning the adulteration of drugs and food products, and rightly so, for the practise is one which very seriously affects the health as well as pockets of the people. It is very desirable to know how these laws are enforced, and with what results. With this object in view the Department of Agriculture, under authority of Congress, desires from any person who can aid it in the investigation answers to the following questions:

(1) Do you know of any new adulterant? If yes, state what, and how used.

(2) Would a national fôod, and drug, law assist in preventing adulteration?

(3) Would uniform food, drug, and pharmaceutical laws tend to promote efficiency and purity?

(4) Please suggest what would best promote the interests of consumers and legitimate manufacturers and dealers.

(5) What is your opinion as to the extent of damage done legitimate business by imitation of brand, packages, etc.?

(6) To what extent do sophistication, misbranding, and injurious adulteration exist?

(7) Have State laws aided in preventing adulteration? To what extent?

(8) Would a national law assist State officials in properly executing the local laws?

(9) Have adulteration, sophistication, and misbranding increased or decreased?

Replies should be addressed to A. J. Medderburn, Special Agent, Department of Agriculture, Washington, D. C.

Reviews and Book Notices.

A System of Practical Therapeutics.—Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital. Vol. iv. with illustrations. Cloth, royal octavo, 1162 pages. Lea. Brothers & Co., Philadelphia, 1897.

It has been several years since the third volume of this work was published, and the advances in treatment have been so rapid during that time, that a single volume setting forth the present views of the most experienced men, was desirable to bring the system up to date, and will be welcomed by the profession. The work is a composite one, each author contributing a paper under his own name, upon some subject with which he is especially familiar, and in these papers it has been made the rule not to discuss various plans and methods which may have been introduced but to let them bring out the personal method of the author. Thus there is a personality and directness about each paper that is very satisfactory.

We will not venture a review of all the excellent essays that go to make up the volume but call attention to a few which are especially interesting. The volume opens with a discussion of the virtues of hydrotherapy in various disorders, by Dr. Simon Baruch. He is followed by Dr. S. Edwin Sally, of Colorado, who gives briefly the various modern methods in the treatment of tuberculosis. Among the most interesting articles in the book are those by Dr. J. M. Anders, of Philadelphia, on typhoid and malarial fevers and of Dr. Hare on scarlet fever. Dr. Anders' articles are particularly well written and will be read with much profit. In the treatment of typhoid he attaches all importance to the Brand treatment, though he is tempted in some instances to depart from its strict observance, while Dr. Baruch credits these departures with the less favorable results in this country as compared with those in other countries where the method is carried out to the letter. His treatment of malarial fever will receive the endorsement of the majority of southern practitioners, though he does not lay sufficient stress upon the benefit to be derived from the mercurial purge in preparing the alimentary canal for the rapid absorption of quinine, as well as in removing the intestinal poisons which aggravate the patient's discomfort. The burden of Dr. William Halock Park's song on the treatment of diphtheria may be seen in his first sentence: "In the treatment of diphtheria we have at last a specific remedy."

The subjects of peritonitis, appendicitis, paratyphlitic abscess and obstruction of the bowels are comitted to Dr. George Ryerson Fowler, professor of surgery in the New York Polyclinic. With most surgeons the author advocates early operation in appendicitis. He says "As soon as a positive diagnosis of progressive appendicitis is asured, the abdomen should be opened and the appendix removed. The conditions present are usually beyond the reach of remedial remedies or the power of nature to control. On the other hand, with moderately skilful surgical aid and strict attention to surgical details, both preliminary and during the course of the operation, the latter entails less risk to life than that which is involved in even a mild attack of appendicitis which remains stationary at the end of twenty-four hours."

Diseases of the rectum and anus are under the charge of Dr. Jos. M. Mathews, of Louisville. Dr. Mathews stands second to none in this specialty and his writings may always be read with profit. Dr. W. W. Johnston writes on diarrhœal diseases and dysentery. There are also sections devoted to diseases of the nose and throat, of the chest, nervous diseases, genito-urinary diseases of women, and a short chapter on diseases of the eye and ear.

We can heartily commend the work as a most useful addition to the library of the general practitioner.

Eye-strain in Health and Disease.—With special reference to the amelioration or cure of chronic nervous derangement without the aid of drugs. By Ambrose L. Ranney, A. M., M. D., author of "Lectures on nervous diseases," "The applied anatomy of the nervous system," etc.; late Professor of nervous diseases in the medical department of the University of Vermont and of the Anatomy of the Nervous System in the New York Post-Graduate Medical School, etc. Illustrated with 38 wood-cuts. One volume, royal octavo, pages viii-321. Extra cloth, beveled edges, $2.00 net. The F. A. Davis Co., Philadelphia.

In this volume the author has paid especial attention to the part eye-strain bears in the causation of many nervous diseases, and secondarily in shortening life. There is doubtless much truth in his reasoning that the constant strain from uncorrected errors of refraction tend to consume the reserve-capital of nerve force and so lead to and exaggerate nervous disorders. The striking examples where correction of refractive and muscular errors have effected a cure, where medicinal and hygienie treatment had failed, go far to prove the correctness of this theory. However, there seems to be a tendency for the author to allow his enthusiasm to carry him too far in this direction.

The work will do much to aid the practitioner in arriving at the true cause of much of his patients' suffering and in this may do good. The chapter on tests for vision is made very plain, though the description of ophthalmometers, tropometers, perimeters, and such instruments could hardly be intended for the general practitioner.

Abstracts.

Professional Hints.—Dr. George W. Griffith gives some very practical hints in the *Louisville Medical Monthly* as follows:

It is a bad idea to have office, residence and stable in different portions of the city.

It is a bad idea to be too prompt with the hypodermic syringe. It is like a gun, dangerous without lock, stock or barrel.

It is a bad idea to have a small slate in your office. It indicates small business.

It is a bad idea to neglect your office hours. "Take care of your office and your office will take care of you."

It is a bad idea to turn professional visits into social business.

It is a bad idea for the young doctor to live in single blessedness too long.

It is a bad idea not to send out your bills for professional service at the end of each quarter, making no exceptions.

It is a bad idea to turn aside from the Standard U. S. Dispensatory to follow false gods.

It is a bad idea to encourage your patients to put off sending for you until unseasonsble hours.

It is a bad idea to make your business secondary to anything else.

It is a bad idea not to stand by your respectable professional brother. Curses like boomerangs come home to base.

It is a bad idea for the professional man to dress and look like a jockey.

It is a bad idea not to have your sign give your full name. Some other "McGregors" may come in and get the benefit of your reputation.

It is a bad idea not to belong to a first-class medical society, and attend regularly all its meetings.

It is a bad idea not to have "Office Practice Cash" prominently displayed in your office. It often prevents the transient "Thank you."

It is a bad idea not to have a good sign that every one can see.

It is a bad idea to have the office hours on front of office where the public can see them. You may be (very often) in your office outside of your office hours.—*Md. Med. Jour.*

INJECTIONS OF ARTIFICIAL SERUM AS A MEANS OF PREVENTING DEATH IN BURNS.—Tommasoli (*Rif. Mèd.* and *British Medical Journal*) recalls the fact that he sent to the Dermatological Congress, held in London in 1896, a note giving an account of trials made by him during a period of three years with artificial serum as a means of treatment in certain skin affections, which he believes to be due to chronic infection intoxicatiòn or autointoxication. In some cases—two of diffuse chronic eczema, one of scattered folliculitis, one of senile pruritus—a cure had been effected; a case of lichen planus, in which itching was very marked, was cured in thirty-six days. Since then the same treatment has been successful in cases of psoriasis and various pruriginous affections. Tommasoli now reports the results of the same method of treatment in two cases of very extensive burns. In one the patient was a woman, aged 60 years, who was burned severly over two-thirds of the front of the body, face, and limbs. Diarrhea and delirium had set in, and death seemed to be imminent, when Tommasoli determined to try the effect of injections of ordinary artificial serum composed of chloride of sodium and bicarbonate of sodium. The patient, who was burned on December 2, came under his care on December 4. On December 10 a first injection of 300 grammes of serum was given. The next day one litre was injected in two doses. On December 12 a litre was injected in one dose, the patient being kept quiet meanwhile in a bath. On December 13 another litre was injected. On December 14 the patient died. The effect of the injections had, however, been distinctly good, the patient passing some hours of freedom from pain after each one. Encouraged by this result Tommasoli adopted the same method in the case of a man, aged 20 years, who was severly burned all over the right side of the front of the chest, the axilla, and the arm, as well as over the whole of the back from the shoulders to the buttocks and over all the right buttock. He was admitted on March 12, and on the 13th an injection of 250 grammes of serum was given. One of 300 grammes was given on the 14th, one of 400 grammes on the 15th. On the 16th the wounds were dressed with iodoform, but this had to be discontinued in a few days on account of its toxic effects. On the 17th an injection of 400 grammes was given, and on the 18th and every subsequent day till April 6 one of 500 grammes. From the first the patient, though prostrated by pain, held his own; then he improved rapidly, and on May 3, when he insisted on leaving the hospital, his general condition was excellent, and the wounds had a healthy appearance. Experiments on rabbits and dogs showed that injections of artificial serum have a very distinct effect in preseving life after severe burns.—*University Medical Magazine.*

TREATMENT OF ACUTE PERITONITIS.—Senn (*Journal of the American Medical Association*) in the course of an exhaustive article upon the above subject, makes the following remarks:

A general discussion of medical treatment of peritonitis is out of place, but reference as to what a surgeon should do and what he should not do is pertinent. Stomach feeding must be limited to the administration of liquid food and stimulants. Rectal enemata must be employed if nausea and vomiting are great. Distressing thirst can often be relieved by rectal enemata of warm water or by its hypodermic infusion. The tharapeutics of cathartics and opium are not definitely settled. Most practitioners administer cathartics as soon as symptoms begin, and the results have been much better since the method has come into general use. The use of cathartics is absolutely contra-indicated in peritonitis due to perforation. In such cases opium is useful and justifiable. Strychnine, camphor, and alcholic stimulants should be used early. The application of ice or cold over the abdomen frequently succeeds in diminishing tympanites. If the heart's action is weak, hot applications are more agreeable to the patient and a better stimulant.—*University Medical Magazine.*

THE SURGICAL TREATMENT OF FIBROID TUMORS OF THE UTERUS. —Dr. Augustin H. Gœlet of New York, in a paper read by invitation before the Mississippi Valley Medical Association at Louisville, enumerates as the surgical treatment of this class of pelvic tumors, *Curettage*, division of the *uterine arteries*, *myomectomy* and *hysterectomy.* The conservative trend of the author's views is apparent. He thinks the use of electricity, in these conditions at least, should be limited to inoperable cases where the constitutional condition or cardiac disease prohibits, or where the patient refuses to consent to operation.

He believes the prejudice against operation is being rapidly removed, because the feasibility of conservative procedures has been demonstrated, and because the mortality of hysterectomy has been so greatly reduced. Attention is directed to the fact that an extensive myomectomy upon an uterus the seat of numerous fibroids is a successful possibility now wheras only a few years back the uterus would have been sacrificed in such cases.

Curettage is designated a palliative measure against hæmorrhage and endometritis but it should constitute an auxiliary to all operations of a less radical nature than hysterectomy.

For permanent obliteration of the uterine arteries complete or almost complete atrophy of the tumor is claimed when it is appropriately limited and positive destruction of the continuity of the vessels is secured. Divulsion as well as ligature of the vessels is insisted upon as essential to secure permanent arrest of the circulation. Simple ligature cannot be depended upon because some broad ligament tissue is always included, and when the included tissue shrinks in consequence of the compression, the ligature loosens and the circulation in the vessels is frequently restored.

This operation should be limited to small interstitial growths and small subperitoneal tumors which spring from the uterine wall below the fundus. Those growing from the fundus or near the fundus are nourished chiefly by the ovarian and not the uterine arteries.

The removal of very large tumors of the submucous variety which fill the uterine cavity, through the abdomen by incising the uterine wall and saving the uterus is regarded as preferable and more certain work than attempting to empty the uterus through the vagina.

The author does not think vaginal hysterectomy for uterine fibroids is a necessary or justifiable operation, since tumors which are sufficiently small to permit removal in this manner either need not be interfered with or if they are causing symptoms atrophy may be secured by dividing the uterine arteries or an abdominal myomectomy will save the uterus.

Abdominal hysterectomy should be reserved he thinks for cases where these other operations are not feasible and especially where the size of the tumor makes it a source of great inconvenience and where degenerative changes have taken place.

CONTRAINDICATIONS TO SODIUM SALICYLATE IN RHEUMATISM. —Jaccoud (*Lyon Mèdical,*) believes that grave consequences may result from the employment of sodium salicylate in acute rheumatism with visceral localizations. It not only neither cures nor prevents them, but it may even favor their production. The drug should be suspended when delirium sets in before the diagnosis of cerebral rheumatism is established. This is necessary also if the delirium be of an alcoholic or hysterical nature, or result from any intoxication. In the cardio-pulmonary complications the same is also true. During the past ten years Jaccoud has observed that salicylates lower the fever and relieve the pain, but do not influence at all these localizations. By persisting in their employment, he believes that involvement of the myocardium is hastened.—*University Medical Magazine.*

THE INFLUENCE OF BICYCLING ON THE KIDNEYS. A CONTRIBUTION TO OUR KNOWLEDGE OF PHYSIOLOGICAL ALBUMINURIA.—Mueller (*Münchener medicinische Wochenschrift*) has carefully investigated the urine of twelve persons after severe muscular exertion in bicycle riding with the following results: In the urine of eight of eleven examined, or 72 per cent., he found albumin, and in eight out of twelve, or 58 per cent., a considerable number of all forms of casts, in six of which the casts were as numerous as is seen in acute and chronic forms of parenchymatous nephritis. In two, or 16 per cent., he found a few true hyaline casts with albumin, and in another there were casts of every variety and kidney epithelium, but no albumin. Only two urines, or 16 per cent., were constantly normal. The investigations confirm those of Stablewski and Leube, that muscular exertion can cause albuminuria. It is therefore a physiological or functional albuminuria of short duration. It differs from other forms of physiological albuminuria, in which few or no casts are found. The casts here, however, were only found with the centrifuge, after forced riding, racing, and excessive muscular exertion. That frequently repeated over-exertion in bicycling might develop chronic irritation, perhaps true chronic nephritis, appear from the observation of two other cases improbable.—*University Medical Magazine.*

PREPARATIONS OF IRON IN CHLOROSIS AND ANEMIA.—This subject was recently discussed at a meeting of the Société de Thérapeutique (*New York Medical Journal*) by M. Bardet. He said that the majority of authors regretted that it had been generalized by including in it the treatment of various forms of anemia, instead of limiting it to chlorosis He, however, was of the opinion that when it was necessary to use iron preparation the special treatment became the same in chlorosis as in simple anemia. It has been well said that in the treatment of anemia the principle indication was to remove the cause, and then the anemia would disappear. But, he said, it was none the less true that the iron treatment played a great part in therapeutic intervention, and consequently it would be prejudicial to leave out anemia in a discussion on iron treatment. Moreover, he doubted whether it was correct to profess to be able to remove the cause in all cases. The value of different preparations of iron had been the subject of much discussion, but Bardet was convinced that all these discussions were usless, and that all iron preparations were good or bad according to the particular cases, not forgetting that everything depended on the absorption, and that this was itself dependent exclusively upon the digestion; and as this was a most complex phenomenon, varying according to the individual, certain preparations might prove good for some persons and bad for others. With regard to the different iron preparations, Bardet preferred hemoglobin, although there was another preparation which he thought should not be forgotten in a discussion on this subject. This was glycero-phosphate of iron, which he thought was destined to take an important place in therapeutics. Up to the present time it had not been easy of emplyment owing to the difficulty in preserving it. Bardet, however, had made use of this salt in anemic persons by combining an organic preparation of iron with the glycero-phosphate of iron, and particularly with the phospho-glycerate of lime. He had employed these combinations for the past three months with the best results —*University Medical Magazine.*

INDICATIONS FOR PARACENTESIS OF THE MEMRBANA TYMPANI IN OTITIS MEDIA ACUTA.—Dr. H. V. Wurdman (*The Laryngscope*) abvocates early paracentesis in acute otitis media and calls especial attention to the following points:

I. Earache is but a warning of, perhaps, dangerous disease, the pain of which may be masked by opiates to the ultimate risk of the patient's life.

II. If the drum-head be reddened or bulging, or if fluid be detected, it is advisable to incise the membrane at once before it bursts, as the character, location and extent of tissue destruction is thereby limited.

III. Pain is relieved at once by the paracentesis, the course of the disease is shortened, the symptoms mitigated and sequelæ prevented by this, and after appropiate treatment.

IV. If the case be seen after spontaneous perforation, the hole in the drum-head will often be found to be too small or poorly adapted for proper drainage, and it may be advisable to enlarge it by paracentesis.

V. The little operation gives but temporary pain, and, if the physician does not make too much of a show, will be tolerated by any patient who will be thankful for the relief afforded his symptoms.

TREATMENT OF YELLOW FEVER.—(Dr. A. K. Bond, *Md. Med. Jour.*) The popular opinion sometimes finds utterance, that under good nursing yellow fever patients come through all right; that the nursing is the main point. It is easy to accept if "good nursing" includes strict confinement to bed; protection from worry of all sorts; bright wholesome surroundings; simple, patient efforts after nourishment; warm applications, mustard, etc., over the distressed regions; maintenance of the urine flow by simple diuretic agencies; and thorough cleansing of the digestive tract at the outset, a process which the intelligent housewife holds to with grim tenacity in spite of all the pooh poohing of alleged science. If the doctor is one who understands nursing (not all do) and who will take the necessary trouble (not all care to), the "nursing" will give still better results under his supervision.

A somewhat similiar opinion to the above was given by Dr. Porcher of Charleston before the Pan-American Congress when he asserted that in temperate people an ordinary case taken early presents no violent third stage, no black vomit, no albuminuria, no suppression of urine. That (and this is likewise the experience of Dr. Belot of Havana) out of one hundred fair cases seen early, ninety-five may be cured. That the best treatment is as follows: Keep the head, hands and arms continually sponged with ice-cold water at the beginning of the attack; and when ever the temperature begins to climb sponge again in the same way. Give at the beginning of the case twenty grains of calomel with twenty-five grains of quinine and after a time give sulphate of magnesia to complete the cleaning out. Apply mustard plasters over the whole abdomen, with frequent mustard foot baths. After the salts have acted give every two or three hours a dessertspoonful of a mixture containing, in six ounces of water, one grain of morphia and one or two drachms each of potassium citrate and acetate. He holds that no other treatment is necessary. The housewife would use eastor oil, enemata, hot teas and "niter" with somewhat the same effect; but calomel stays down better than castor oil, unless a great excess of the latter is given.

Therapeutic Hints.

EXTERNAL HÆMORRHOIDS.—

Fluid extract witch hazel, 1 ounce.
Fluid extract golden seal, 4 drachms.
Compound tincture benzoin, 4 drachms.
Tincture belladonna, 1 drachm.
Carbolized olive oil (5 per cent. carbolic acid), suffito make three ounces.

Apply often.

—*Medical and Surgical Reporter.*

ACUTE ECZEMA.—In acute eczema the following wash may be used allowing the sediment to coat over the parts:

℞—Calaminæ,	
Zinc oxidi, ...	aa ʒ ii vel ʒ iij.
Glycerini, ...	
Alcoholis, ...	aa fl ʒ j.
Liq. calcis, ...	
Aq. q. s. ad.	fl. ℥. ij.

M—*Stelwagon, Ex.*

INTERCOSTAL NEURALGIA—According to the *Journal des Practiciens*, Cheron recommends the following prescription for intercostal neuralgia associated with uterine disturbances:

℞—Tincture of gelsemium . . .	100 drops
Simple syrup	1½ ounces
Distilled water . , ...	6 drachms

Of this two or three teaspoonfuls may be taken twice or thrice a day. Such a prescription ought not to be used if the heart is at all feeble.—*Med. Fortnightly.*

SYRUP FOR THE TREATMENT OF EPILEPSY WITH VIOLENT EXCITEMENT:

℞—Pot. bromidi	70		(℥ ii 2-5.)
Pilocarpin nitratis . .		035	(gr. ½.)
Syr. amygadlæ amaræ .	400		(℥ xiii.)
Aquæ			(℥ xx.)

A tablespoonful at a time.

Each tablespoonful of this syrup contains about a gramme of potassium bromide and half a milligramme of pilocarpin.

Under this treatment Dr. Voisin has found the maniacal excitement to cease and the diuresis to become more active. Gastric disturbances due to the potassium bromide are said to be less marked in such patients than usually, so that it is necessary to discontinue the treatment as frequently as is otherwise the case.—*Med. Week.*—*Med. Rev. of Reviews.*

ERYSIPELAS OF THE FACE.—The *Presse Medicale* recommends the following formular:

℞—Ac. carbolici		
Tinct. iodi		
Alcoholis	aa 30	(℥ i.)
Olei terebinthinæ . .	60	(℥ ii.)
Glycerini	90	(℥ iii.)

M.—The lesions are to be painted with this liniment every two hours, and covered with aseptic tarlatan.—*Ex.*

ASTHMA.—Dr. S. Solis-Cohen frequently prescribes the *fluid extract of quebracho* in the treatment of asthma, whether of the bronchial or purely spasmodic variety. The dose is from 30 minims to a fluidram, and may be repeated hourly or less frequently, according to circumstances. When the stomach is irritable it should be given in a bland vehicle, or some liquid preparation of pepsin. It acts promptly or not at all. Unless relief is experienced within 48 hours it should be discontinued. When useful it may be continued in combination with an antispasmodic, such as *sodium nitrite*, with a sedative like *strontium bromid*, or with an *ammonium salt* or other *expectorant.*—*Phil. Polyclinic.*

THE PUBLIC SERVICE.

UNITED STATES MARINE HOSPITAL SERVICE.

For the week ending September, 25, 1897:

Wheeler, W. A., surgeon, to proceed to St. Louis, Mo., and assume temporary command of service, Sept. 20, 1897.

Bratton, W. D., passed assistant surgeon, relieved from waiting orders and directed to proceed to Sabine Pass, Texas, for special duty, Sept. 20, 1897.

Magruder, G. M., passed assistant surgeon, when relieved by passed assisiant surgeon W. D. Bratton, to proceed to Galveston, Texas, and await orders, Sept. 20, 1897.

Cobb, J. O., passed assistant surgeon, to proceed to Cairo, Ill., for special duty, Sept. 20, 1897.

THE NAVY.

For the week ending October 9, 1897.

October 2, Medical Inspector J. C. Wise, passed assistant surgeon F. A. Hesler, assistant surgeon, F. K. Smith, detached from the "Philadelphia" and ordered to the "Baltimore."

Medical Director N. L. Bates, detached from the Museum of Hygiene and ordered to duty as Chief of the Burea of Medicine and Surgery.

October 5, Medical Inspector J. R. Tryon, detached from the Burea of Medicine and Surgery and ordered to New York as general inspector of United States naval hospitals.

October 6, Medical Inspector H. J. Bahin, ordered at president of Naval Examining Board, New York Oct. 9.

Medical Director C. H. White, detached as president of Naval Examining Board, New York, Oct. 9, and ordered to Washington in charge of Naval Museum of Hygiene.

October 8, Assistant surgeon J. C. Pryor, detached from the naval hospital, Mare Island, and ordered to the "Adams."

Miscellaneous Items.

We regret to learn of the misfortune of Mr. Ernest Hart, editor of the *British Medical Journal.* He was suffering with some necrosis of the bones of the foot, associated with glycosuria and it was deemed necessary to amputate the leg, which operation was well borne and resulted in great improvement of Mr. Hart's health.

Medical Director Newton L. Bates is announced as the newly appointed surgeon general of the navy.

Dr. J. W. P. Smithwick, Aurora, N. C., desires to sell his practice and drugstore. Write him for particulars.

We regret to learn of the death of Dr. J. C. Jenkins, Everetts, N. C. Dr. Jenkins was a member of the State Medical Society.

Cards are out for the marriage of Dr. E. G. Goodman of El Paso, N. C., to Miss Maria Sandlin, at Richlands, N. C., October 20, 1897.

Dr. W. H. Bobbitt has removed from Raleigh, N. C., to Marion, Indiana, where he will make surgery and gynecology a special line of work.

Dr. J. T. Monroe, of Union, S. C., committed suicide in Atlanta, Ga., by cutting his throat. He had been addicted to the use of morphine and whiskey.

Mayor Collier, of Atlanta, Ga., has instructed Chief Veal to proceed legally against Dr. W. C. Leary, of that city, for attending a case of yellow fever and not reporting it. The doctor declares that he only saw the patient twice when he was dismissed, and did not have time to make a diagnosis. The penalty it convicted is $100 fine or thirty days in jail.—*Ex.* [Who is to proceed against Mayor Collier for inviting yellow fever victims into his city? And so yellow fever germs can live in Atlanta, and even develop there.]

The Spanish Government is naturally responsible for the present epidemic of fever that is playing havoc in some parts of the South. Our improved sanitary conditions are lightening the severity of the attacks in this country, but there are in the aggregate a large number of deaths among our people for which Spain should suffer. Weyler made a pesthouse of Havana, and the fleeing refugees brought the disease to our shores. Havana has been a plague-spot for many years and a menace to us, but in its present condition it is unusually bad.—*Amer. Méd. and. Surg. Bull.*

Announcement is made in Public Health Reports of the death by accident, of passed assistant surgeon W. D. Bratton M. H. S., while on duty at Sabine Pass. In the changes in the service on another page, it will be noted Dr. Bratton had just been relieved from waiting orders and ordered to Sabine Pass for special duty. He had been in the arid regions of New Mexico for over a year on account of pulmonary tuberculosis and had improved sufficiently to perform his official duties. We have not learned the particulars of his death.

Students of medicine who are planning to take up study in one of the Colleges in Louisville, Ky. during the coming year will be glad to learn that the Young Men's Christian Association through their College Department are planning for special features that will be of intrest to college men. The College Department will be able to help students to find good places to board and room, and, besides the usual features in the way of receptions and entertainments, the privileges in the Central Department building including a new magnificent swimming pool will be placed at the disposal of students who do not live in Louisville for a nominal fee which can be paid after examination of the privileges mentioned. Particulars as to board, room and other matters can be secured by addressing the College Secretary, Mr. E. A. Forbes, 318 W. Broadway, Louisville, Ky.

Brother Culbertson, of the Cincinnati Lancet-Clinic has been getting off some of his scathing satire against the Editor of the Louisville Medical Monthly because the latter recently published in his own journal some very lauditory testimonials from the President of the Kentucky State Board of Health, the Pastor of the Baptist Church, the Presiding Elder of the Methodist Church and others. He seems at a loss to understand what has happened to the Editor of the Louisville Medical Monthly that if has become necessary for him to publish these testimonials of his moral, professional and financial standing.

Perhaps the following quotation from Mathews' Quarterly Journal may open Dr. Culbertson's eyes to the reason for all this:

"Being President of the State Board of Health of Kentucky, I am frequently solicited by physicians to endorse private hospitals and sanitariums for publication. In all deserving instances, where ethical principles are observed, I am pleased to do so. Recently I have been embarrased by a physician of this city, who is establishing a private hospital for the opium habit. I deem it only just to myself to state that when my endorsement was obtained I was not made aware of the methods to be pursued. I have had my name stricken from the list of collaborators of the Louisville Medical Monthly, and have withdrawn my indorse- of the sanitarium referred to. J. M. MATHEWS."

Merchandise shipped from New Orleans during the yellow fever outbreak is classified as follows:

Class No. 1.—All new and dry material unpacked, such as lumber, machinery, brick, bar and sheet iron, agricultural implements, iron ties, staves, saddlery, wagons, new furniture, new trunks, hardware without packing, lime, etc., being incapable of conveying infection, require no disinfection.

Class No. 2.—All goods in original wooden or metal packages, not broken in New Orleans, do not require disinfection except outside of container.

Class No. 3.—Goods packed in textile material not broken in New Orleans, and kept perfectly dry, do not require disinfection, except the container.

Class No. 4.—Fruits, sound, and taken directly from the vessel, and transferred immediately to the cars for shipment require no disinfection.

Class Nos. 2, 3, and 4.—The outside of containers must be submitted to disinfection.

Reading Notices.

PARKE, DAVIS & CO. SUPPLY ALL POTENCIES—The ringing report in favor of the serum treatment of laryngeal diphtheria submitted to the American Pædiatric Society, and the stress laid on the early employment of a potent and concentrated antitoxin, impel us to remind the readers of the NORTH CAROLINA MEDICAL JOURNAL that we have long been in position to supply every strength from 250 to 2000 units. The profession seems to lean by preference to doses of 1000 to 1500 units, but we can supply promptly all requisitions for a highly concentrated serum in doses of 2000 units.

Our serum is rigorously tested and possesses when it leaves our hands, a slight excess of antitoxic power to make good the loss of strength ensuing with age.

We furthermore particularly call your attention to the fact that our containers are *glass bulbs hermetically sealed*—not ordinary vials and corks. Dr. Geo. Duffield, in the *Journal of the American Medical Association*, March 6th, said: "I have found Parke, Davis & Co.'s anti-diphtheritic serum most efficacious. Apart from the potency of this brand, I must commend the ingenious manner in which it is marketed, viz., in hermetically sealed bulbs, which exclude the air and keep the serum strictly septic." Dr. B. H. Detwiler, in the *Therapeutic Gazette* for January, stated: "I prefer the anti-diphtheritic serum made by Parke, Davis & Co., as it is held in bulb tubes that are smaller in bulk, more convenient for use, more aseptic than the ordinary packages with corks, and the serum itself gives less pain in injecting." Dr. W. A. Walker, in *Pediatrics*, October, 1899, said: "I have used several serums, but have been best satisfied with the effects of that sent out from the Biological Department of Messrs. Parke, Davis & Co. I heartily approve of the way this firm now puts up the serum, in bulbs insteat of in bottles." An editorial in the *St. Louis Medical Era*, January issue, affirms: "The antitoxin now offered the profession by Messrs. Parke, Davis & Co. is undoubtedly the safest and most reliable product on the market."

We should be very glad to have you write for our file of antitoxin literature, which includes interesting reports from hospital, municipal and private practice. Very Resptfully,

Parke, Davis & Co.

Every physician who uses electricity should send for a copy of The Electro Therapeutist, a monthly journal devoted to electro-therapeutics for the general practitioner. Write the Editor Wm. F. Howe, M. D., Indianapolis, Ind., mentioning this Journal and he will send you sample copies gratis.

DOCTOR:—Your library is not complete without the Hypnotic Magazine. Cost of this handsome monthly, including premium book on Suggestive Therapeutics is only one dollar ($1.00) a year.

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56 5th Avenue, Chicago.

BUFFALO LITHIA WATER

Disintegrates and breaks down Urinary Calculi, both the Uric Acid and Phosphatic Formation, and other Varieties as well.

ANALYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

NEW YORK, December 3, 1896.

Dr. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

Dear Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection containing a number of fragments, and also the three boxes, each containing a single Calculus, mentioned in your letter as discharged by different patients while under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of **each specimen, and designated** them alphabetically.

One of Calculi from collection marked "A" was **9/16 of an inch in diameter,** of an orange color, and on section exhibited a nucleus surrounded by nine concentric layers of a crystalline structure. On chemical analysis it was found to consist of **Uric Acid** (colored by organic substances from the urine), with traces of Ammonium Urate and Calcium Oxolate. A fragment of a broken down Calculus from the same collection was found to consist of **Uric Acid.**

One of the fragments taken at random from the collection marked "B" which was still more disintegrated than the preceding one, proved on analysis to be composed chiefly of **Uric Acid** and Ammonium Urate, with a trace of Calcium Oxolate.

The contents of the boxes marked "C" consisted chiefly of whitish Crystalline materials. On microscopic examination they exhibited well defined and prismatic crystals, characteristic of "Triple Phosphate." On chemical analysis they were found to consist of Magnesium and Ammonium Phosphate (triple phosphate), Calcium Phosphate, Calcium Carbonate a trace, Sodium and Potossium Salts in traces, Uric Acid and Urates none, Calcium Oxolate none, Organic debris in considerable quantity, and matters foreign to Calculi.

The fragments of Calculi in the collection marked "D" were numerous, and of sizes varying from small fragments to 7/8 inches in length, 3/16 inches in width and 5/16 inches in thickness. Some of the fragments were white and others were gray in color. On chemical analysis they were found to consist partly of the variety known as "Fusible Calculus," Ammonium and Magnesium Phosphate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in traces, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly spherical in shape, consisting of Crystalline layers from 3/8 to 1/4 of an inch in diameter. They were of a brown color, and on analysis were found to be chiefly Uric Acid, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,

Analyses F, G and H, omitted for lack of space. R. OGDEN DOREMUS.

Water in Cases of One Dozen Half-Gallon Bottles, $5.00. F. O. B. Here.

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DESCRIPTIVE LITERATURE

UPON APPLICATION.

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Twentieth Year. NOVEMBER 5, 1897. Vol. 41. No.

NORTH CAROLINA MEDICAL JOURNAL.

PUBLISHED SEMI-MONTHLY AT $2.00 PER ANNUM.

Robert D. Jewett, M.D., Editor.

[Entered at the Post-Office at Wilmington, N. C., as Second-class mail matter.]

FROM all that has appeared in the medical press of late, our private correspondence with physicians, the interviews of our representatives with medical men in every State and Territory, there seems to be nothing so valuable as

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NORTH CAROLINA
MEDICAL JOURNAL.

A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

Vol. XLI Wilmington, November 5, 1897. No. 9.

Original Communications.

REPORT OF A CASE OF OPHTHALMIA NEONATORUM, WITH DISCUSSION BEFORE THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY.

[Stenographically reported, and abstracted for this Journal, by C. C. Mapes, Louisville, Ky.]

THE subject of ophthalmia neonatorum is always of interest to the progressive student of medicine, and especially so to the pediatrician and the general practitioner. In the light of modern scientific research, the statement seems warranted that nine-tenths of the cases of this disease could be prevented by prompt and adequate prophylactic measures on the part of the general practitioner, who is called upon to attend the mother during parturition and the child during the first few days of its earthly existence.

The time has come when preventive medicine bears a most intimate and important relation to medical science as a whole, and the old adage, "an ounce of prevention is worth a pound of cure," contains much truth. This is forcibly exemplified in the disease under consideration, for it seems a truth, beyond cavil, that by proper preventive measures instituted by the general practitioner immediately after birth of the child, the ravages of ophthalmia neonatorum might be very appreciably lessened, if not altogether stamped out of existence; while without such precautionary means, the disease gets a foothold, so to speak, and occasionally, despite all care and treatment by the most modern methods, in competent hands, one or both eyes may be destroyed. The duty of the general practitioner, therefore, seems very plain, and his responsibility is equally apparent.

* * * * * * *

Dr. Samuel G. Dabney, before a recent meeting of the Louisville Medico-Chirurgical Society, reported the following unfortunate case, which deserves especial mention, not only because of the remarkable result, but because it is very generally believed that by the treatment adopted such a result may be obviated in the vast majority of instances.

He recently saw a baby that had been delivered with forceps a few days previously; one eyelid was slightly wounded in the process of delivery; the child developed a purulent ophthalmia four days after its birth. He was called to see the case on the sixth day. At that time both eyes were involved, but both corneæ were clear, and he expressed the opinion that the child would recover, that both eyes would get well. For the first two days the attendents were two women in the house, and he thinks they followed instructions to the letter. They washed the child's eyes every fifteen minutes with bichloride of mercury, one dram of chloride of sodium, and one pint of water. Not being satisfied with the child's condition at the end of two days, he employed a trained nurse, who remained a week and did, as far as he could ascertain, most excellent work. The pus seemed to be diminished somewhat in amount, but swelling continued. Then the cornea of the eye first affected began to show a yellow color, although diminution of the pus was marked. The same line of treatment was continued, with the addition of a little atropine solution,—one grain to the ounce of water,—three or four times daily. From the time the case was first seen, daily applications of nitrate of silver, ten grains to the ounce, were made. The eye first affected became progressively worse, despite all care and treatment, the cornea being rapidly involved. When a little later the second cornea also became involved, he told the family that one nurse was not enough, and from that time two trained nurses were in constant attendance, giving absolute attention every ten minutes, but notwithstanding this both corneæ sloughed, and he thinks both eyes will be lost.

This is the first case he has seen which has resulted so disastrously. Looking back over the case he can see nothing left undone that could have been done, excepting that perhaps two trained nurses should have ben in attendance from the beginning. The nurse that was in charge of the case, however, worked eighteen hours out of the twenty-four, and was faithful and efficient.

A few years ago a case was reported by one of the Philadelphia oculists in which there was a similar result. Not only was a trained nurse in constant attendance, but the oculist himself cleansed the child's eyes every five or ten minutes, for a considerable time.

The present case illustrates how these rare exceptions may occur, how they will baffle all our efforts, and entirely mislead us in the prognosis.

The question had been asked if argonin was used in this case; It was tried, but apparently no benefit being derived, it was discontinued. A thin compress of hot water was used toward the last after involvement of the corneæ had taken place. Iced cloths are not indicated after the corneæ become involved.

The father of the baby asked the cause of the trouble, and was told that it had every appearance of being gonorrheal. He then admitted that at the time of his marriage, a year ago, and even up to the present time, he would have some urethral discharge after coitus, and even after moderate drinking. This had been the case ever since he had gonorrhea, shortly before his marriage.

Formol in proportion of 1 to 1000 was also used as an eye wash, but for controlling the discharge of pus the frequent cleansing and silver applications seemed to do best.

When the spread of the corneal ulcer resisted other means, applications of the actual cautery were tried. The author has sometimes seen this work admirably, but it failed in this case.

The child was born at full term, and its general appearance was good, making the disastrous result the more remarkable. The case is reported because of its rarity. An hundred or perhaps a thousand cases of ophthalmia neonatorum might be seen without such a result.* The only other such case of which the author has knowledge has already been referred to.

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*In the New York Medical Journal for June 26th, 1896, Dr. Lucas Howe states that Cohn's statistics show that about 5 per cent. of cases of ophthalmia neonatorum lose both eyes, despite the best and most prompt treatment.

In the discussion which followed the report of Dr. Dabney's case Dr. Bullock said that he had seen many cases of ophthalmia neonatorum in the Lying—In Hospital, New York, in which a similar line of treatment was followed, but in addition they kept sheet lint wet with ice water over the eyes. Every few minutes the lint would be removed and the eyes bathed or cleansed with an antiseptic solution; that he had seen several babies and one nurse (whose eyes were affected in this way) who became totally blind despite all treatment.

Dr. Ray said that while we were all aware of the ravages of ophthalmia neonatorum the fact would be more forcibly impressed upon anyone who would visit the Kentucky Institution for the Blind and see the number of children there who have become blind from this disease. Sometimes under the best of treatment a case will be lost. He had never lost one, however, in a strong, vigorous, full term child where he had been called before the cornea became involved, but had seen two or three in premature or marasmatic children where the cornea seemed to melt away like snow before the sun, treatment having no influence on the course of the disease. No beneficial effect had been observed by him from the use of bichloride of mercury in the treatment of ophthalmia neonatorum; that he gave it a thorough trial, but long since discontinued its use. That he had never seen a case in which he had not absolutely seen the benefit of nitrate of silver judiciously applied; that he had gone into the sick room and had seen children with pus all over the lids, etc., and applied nitrate of silver solution, and had the family say on his next visit, "the pus discharge from the eye is not nearly so profuse as it was before you made that application," when it had only been a few hours, showing the rapid beneficial effect of the solution. He follows the routine treatment of cleansing the eyes every ten to twenty minutes, depending upon the profuseness of the pus flow, the amount of irritation produced, etc.

There is something in the suggestion made by Wilson as to the use of vaseline; after we cleanse the eye we often find the lid and surrounding parts very much excoriated from applications of nitrate of silver, and the suppuration which has been going on. He is in the habit of filling the eye with vaseline, after carefully washing away the pus. Vaseline protects the skin, covers the mucous membrane, prevents the lids from gluing together, and allows the pus to escape between the lids more rapidly than would otherwise occur.

As to argonin: The first case in which he used this preparation was a premature child having ophthalmia neonatorum; he ordered a five per cent. solution of argonin, and three or four applications arrested the flow of pus. He has used it in one other case, and it seemed to answer just as well as nitrate of silver. It was used by dropping it in the eye twice a day. Each application caused an expression from the attendants that the pus flow was less marked. Argonin seemed to control it promptly and effectually. He uses the saturated solution of boric acid, washing the eye frequently, and if the case is seen early, within the first twenty-four to forty-eight hours, if there is a puffiness about the lids, with discharge of a thick, yellowish pus, he advises the use of ice cloths. When the cornea becomes involved the ice cloths should be discontinued. Some authorities go to the other extreme, and advise the application of hot water; commencing at 98° and graduully increasing the heat, they say water can be used to 135°. This method is highly recommended by some oculists, especially after the cornea has become involved. They even press the lids open, and apply hot water on the the exposed cornea.

A case has been reported before the American Ophthalmological Society, in which there was no specific history. It was treated after the classic manner, still both corneæ became involved and both eyes were lost. This is the case referred to by a previous speaker.

The general condition of the child controls the prognosis to a very great extent; in strong, healthy, and vigorous children we may expect less severe corneal involvement than in premature or marasmatic children. It is sometimes difficult to get a trained nurse that is sufficiently efficient to wash the eyes without destroying the corneal epithelium. When this Is rubbed off in the manipulations, pus gets into the corneal tissue and necrosis rapidly follows.

Dr. Cecil asked the following questions; In cases where we know there is liability to infection with gonorrhea—where we have reason to believe that one or both parents is the subject of the disease—how soon may we expect manifestations of this affection in the eyes of the infant? And are there any peculiar symptoms which would enable us to differentiate this from the ordinary slight eye troubles often seen, probably from defective cleansing in the first few bathings of the child?

In closing Dr. Dabney said in reporting his case he did not go very fully into the subject of ophthalmia neonatorum. The last question asked by Dr. Cecil is an exceedingly pertinent one, and he could not help thinking that most of the cases, the very great majority of them indeed, that recover under slight treatment, are not gonorrheal in origin. We have means of differentiating, with a fair degree of certainty, even from the clinical appearance, the gonorrheal opthalmia of infants from non-gonorrheal. Those cases where there is a little thin, watery discharge, where the lids are easily opened, where there is little swelling of the lids, are not gonorrheal. Where the lids are greatly swollen, with a thick, yellowish pus oozing out between them, the great majority of the cases are gonorrheal and require prompt and active treatment. The non-specific cases are the ones that get well so easily and quickly under simple measures. As to the time we may expect the gonorrheal cases to be manifested, the average time is three to five days. It may be deferred longer, and in violent cases may be observed earlier.

There is some question about the value of bichloride of mercury so far as its antiseptic influence goes, yet combined with boracic acid in solution it makes a good eye wash, and we have the advantage of its possible germicidal power at least. The best way of cleansing the eye is by means of a fountain syringe, having a little pipette, and instructing the nurse how to pull open the lids and direct the point of the syringe well down in the conjunctival sac.

It is a question whether vaseline aids much in controlling suppuration. However, it does keep the lids from sticking together, but unfortunately in severe cases they are absolutely pressed together—the swelling forces them tightly together—and of course vaseline does not prevent that. The main disadvantage in its use is that it makes the lids slippery and rather hard to open, requiring more time at each cleansing.

In regard to preventive treatment: It does seem that in the light of modern scientific research, it is a mistake of the general practitioners, who deliver these babies, not to put nitrate of silver in their eyes at once. This ought to be the routine treatment. The statistics of Crede' show that ophthalmia neonatorum has been reduced from 10 per cent. to one-tenth of 1 per cent. under the instillation of nitrate of silver, 2 per cent. solution, two drops put in the babies eyes at birth.

* * * * * * * *

A point suggested in the foregoing report which should be emphasized is, the obtaining in every case, if possible, the posisitive history of gonorrhea. Without such a history, in the event a suit for malpractice should follow the loss of one or both eyes, the physician might have some difficulty in convincing a court ol law that he was altogether blameless.

It is indeed fortunate that cases such as covered by this report are quite rare—as stated by one author about 5 per cent—yet the fact remains that opthalmia neonatorum is an extremely common affection, and even though the per cent. of cases in which the loss of sight results is small, if by preventive means the number of cases of the disease can be decreased, as we believe to be possible, and the percentage of resulting blindness thereby minimized, we certainly owe the service to humanity.

Society Reports.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-third Annual Meeting at Louisville, Ky.
October 5, 6, 7, 8, 1897.

LOUISVILLE has again sustained her reputation as a convention city, and has demonstrated that within her gates reside the most genial, loyal, and hospitable body of medical men to be found upon the face of the globe.

The Twenty-third Annual Meeting of this society convened in Louisville at 10 o'clock of the morning of October 5th. This, by the way, is the second gathering of this society in Louisville, the sixteenth annual meeting having been held in this city in 1890, under the presidency of Dr. J. M. Mathews.

The meeting was called to order by Dr. H. Horace Grant, Chairman of the Arrangement committee. After prayer by the Rev. E. L. Powell, Governor Bradly was introduced, and spoke in behalf of Louisville and Kentucky. Dr. Thomas Hunt Stucky, president of the association then appeared, and delivered a most eloquent and pleasing address.

PLASTIC OPERATION RESTORING CLOSED LIDS.—By Dr. K. K. Wheelock, Fort Wayne, Ind.

The author reported a case in which an eye had been enucleated in 1881 as a result of small-pox. Artificial eyes have been worn for twelve years, when the socket had become so contracted that it was impossible to longer introduce the artificial eye. The author described the technique of the operation, which he performed for the restoration of the cavity to its normal size.

Dr. Stevenson said these are always most interesting cases. Those occurring as the result of burns usually give the most trouble in getting an artificial eye. Much can be done oftentime by any method which will gradually stretch the tissues.

Dr. Wilder said there is no more difficult class of work in all ophthalmic surgery. The general surgeon should appreciate more the necessity of preserving every possible amount of the conjunctiva. Most patients want to wear an artificial eye too early after the enucleation.

Dr. Wheelock in closing the discussion remarked that if he had the same to do over again, he would operate entirely with the Tiersch graft. These should be applied from the tip of the finger, in that way they can be adapted to any part of the orbit.

THE REMOVAL OF ADENOIDS IN THE VAULT OF PHARYNX.—By Dr. L. C. Kline, Indianapolis.

There is a great diversity of opinion in the use of anæsthetics for the removal of adenoids. The great majority of cases can be operated upon with equally good results by the use of cocaine.

I prefer the gradual operation to that at one sitting. There is less danger of otitis and hemorrhage. The author then exhibited the forceps, which he prefers to use. A mouth-gag is not used, except when the anæsthetic is employed. In tubercular cases, an application of lethyol is very beneficial. Various astringents can be used with some advantage, but surgery is the only sure relief.

SURGERY OF THE AIR-PASSAGES IN CHILDREN.

Dr. J. Homer Coulter said the subject is one of especial importance because of the percentage of deaths from diseases of the air-passages during childhood, because the respiratory and circulatory functions are being crowed to their vital capacity, and because reflexes in childhood are more prominent and frequent than in adult life.

The parents of to-day should be taught that, with our modern methods, technique and usually favorable prognosis, surgery in children is not the night-mare it formerly was. There can no longer be any question of the bad effect of nasal obstruction upon the adjacent organs. Any of the causes of nasal obstruction in children will tend to septum deflection in adult life, and, if for no other reason we are bound to give them the possible relief of our professional skill. As a matter of clinical fact, catarrhal deafness is almost always due to nasal obstruction. The entire field for pathological conditions of the nose does not lie in the post-nasal space, nor is there any good reason why occlusion of the anterior chambers of the nose should not produce as many reflexes as does an hypertrophy of Luschka's tonsil.

Foreign bodies in the nose and throat and the method of their removal, was then considered.

The after-treatment of these cases of surgery is important, and cannot often be left to parents with any degree of satisfaction.

Dr. Thomas suggested that many diseases in the air-passages in children are due to a systematic disturbance or to reflexes. Judgment to differentiate when to use surgery and when therapeutics is an absolute necessity.

TO DRAIN OR NOT TO DRAIN.—By Dr. Arch Dixon, Henderson, Ky.

For some time past drainage after abdominal section has been growing less and less in favor. Whether justly or not is uncertain. The fact is, there are wounds which require drainage and others, which do not. My own experience teaches me that, as a rule, aseptic wounds do not require it and that contaminated, or infected, wounds always do. The author then reviewed the sum of the arguments on the use of drainage in the peritoneal cavity, such as, healing is thereby retarded; drainage is not effective in removing infection; infection may occur through the

the drainage tube; the removal of the tube is painful; vesical complications are possible; hernia may result; frequent removal of the tube is necessary. Much depends upon the manner in which the operation is done.

Dr. Goldsphon called attention to the two styles of abdominal operations; one in which the smallest possible opening is made, the other in which a large wound is used, explaining the advantages claimed for each style of operating.

Dr. Cordier said that if two cases exactly alike were taken and the operation, surroundings and care of each be identical, one drained and the other not, we would almost invariably receive more satisfactory results in the one where drainage was used.

HYSTERECTOMY.—By Dr. F. F. Lawrence, Columbus, Ohio.

In what cases is hysterectomy justifiable? We must consider (1)how many would have died without it; (2) how many would have been hopeless invalids without it; (3) how many could have been cured by other means; (4) the remote conditions or reflex results in those upon whom it has been performed. Hysterectomy is ordinarly performed for cancer, pyosalpinx, fibroma and myoma, tuberculosis, and prolapsus. Hysterectomy for cancer is of doubtful utility, but when necessary should be made by the abdominal route. In pus tubes, hysterectomy should be limited to those in which the walls of the uterus are the seat of the disease. Simple adhesions are not sufficient reason for the performance of hysterectomy.

Small fibroids when invovlving the lower segement of the uterus only, should be treated tentively.

If the small fibroids are in the body of the uterus, they should be treated by either curretting, removing of the tubes and ovaries, or by hysterectomy, as the case may demand. If small fibroids occur near the menopause, currettment with electricity is sufficient. In large fibroids after the menopause, hysterectomy is the only thing to be considered. In myomata, or tuberculosis, hysterectomy is likewise the only thing to be advised, because the removal of the ovaries and tubes does not get all of the diseased tissue.

Any method of operating is to be judged by (1) the safety from sequellæ; (2) the preservation of a firm pelvic floor; (3)

facility of operating; (4) that one which affords the best satisfaction and general results to both patient and operator.

Dr. Goldsphon was opposed to removal of the uterus for septic disease alone in every case. The vaginal route should be more appreciated by the American operators.

Dr. Ochsner said while his experience in hysterectomy had been favorable, yet he was becoming more and more careful about advising the operation of hystetectory. In one case, I did not advise operation, as I considered it beyond the help of even hysterectomy. She was treated tentatively and has since given birth to two children, and has herself remained healthy ever since.

Dr. Newman suggested that as we are able to perfect our technique we will find better results.

PELVIC DISEASE WITHOUT LOCAL SYMPTOMS.—By Dr. Henry P. Newman, of Chicago, Ill.

(1) Pelvic disease even of an aggravated type is often present without noticeable local symptoms; (2) reflex symptoms beginning in more functional disturbance may become so serious as to endanger life and health of the patient, and give rise to misdirected treatment, which does not recognize the causes of the real trouble; (3) and understanding of the relative importance pelvic irritation and certain obstinate and severe affection of remoter organs is essential to a correct diagnosis in many cases; (4) all classes of chronic invalidism in the female, a failure to exclude pelvic disease in the same manner as we exclude diseases of other important organs is unscientific and reprehensible; (5) the cause of medicine will be advanced when practitioners make those comprehensive diagnoses, which seek to know the patient as a whole.

PRIMARY TUBERCULOSIS OF THE RECTUM WITH REPORT OF CASES.

—By Leon Straus, M. D., St. Louis, Missouri.

Tuberculosis of the rectum is a surgical and not a medical condition. A thorough microscopical examination must be made in every case of suspected ulceration. The author reported four cases of removal of the ulcerated tissue and described his operation, in which there was perfect recovery in all but one instance.

His conclusions were (1) Primary tuberculosis of the rectum is not so infrequent as generally supposed; (2) it is surgical and not medical; (3) it cannot be diagnosed positively and invariably by the usual clinical symptoms; (4) the microscope must be employed; (5) local treatment will not cure these cases; only cured by thorough curettment or excision, or both; (6) some of the most hopless cases are cured by repeated operations; (7) all suspicious cases should be subjected to the microscope; (8) we have sufficient evidence that the cases above are to all intents and purposes cured. The paper was discussed by Dr. Pennington, and Ochsner.

TREATMENT OF HERNIA IN OLD MEN.—By Dr. A. J. Ochsner, of Chicago, Ill.

It is a well known fact that hernias in men become more troublesome after the age of fifty. This is attributable to the relaxation of tissue, tendency to obesity and lower vitality in general, according to most authorities, but I am convinced that the more important cause lies in the pressure exerted in evacuating the bladder and rectum, or the presence of an enlarged prostate. The author described his operation for the radical cure of hernia in connection with castration for enlarged prostate. In cases, in which there is simply an hypertrophy, the gland subsequently decreases in size very rapidly, affording much relief.

If the surgeon has perfect control of his methods, securing perfect asepsis, the operation is perfectly safe. It relieves the patient of much discomfort and every argument in favor of the operation for radical cure of hernia is applicable to the operation for resection of the spermatic cord for the relief of conditions due to enlargement of the prostate gland.

It is yet too early to postively determine whether or not these favorable results will be permanent, but we have every reason to believe they will be.

POST-OPERATIVE HERNIA IN APPENDICITIS CASES.—By Dr. Robert T. Morris, New York.

Operators for appendicitis are now using a much smaller incision than formerly, in order that they may avoid the unfortunate effects of a hernia. These hernias are caused by the fact that the lines of muscle traction at this point are different in the different muscles. A pad over the seat of operation induces hernia by inducing absorption of the new connective tissue as it is being formed.

The margin of each muscle should be separated with the greatest care when operating, likewise care should be taken in dividing the peritoneum. In closing the wound each different layer of muscular tissue as well as the peritoneum and fascia should be united with the same tissue from which it was separated in the begining. Thus, the lines of muscular traction will not be disturbed and hernia less likely to be produced.

No bandage or pad should be applied. The patient should be kept in bed at least twenty-one days following the operation.

SOME REMARKS ON APPENDICITIS.—By Dr. J. Y. Brown, St. Louis, Mo.

Conservatism has given place to knowledge in this disease. This knowledge is sufficiently comprehensive and accurate to give us a satisfactory working basis. We must isolate in infectious appendicitis for the same reason that we isolate a case of diphtheria.

Dr. Morriss in discussing the paper said that making a date for operation in a case of appendicitis was certainly undesirable.

We cannot always wait until the third day. The rigor means that the toxines are going into circulation, and are producing and makingan impression upon the sympathetic system.

THE TREATMENT OF SUPPURATING FISTULÆ.—By Dr. E. J. Senn, Chicago, Ill.

The primary dressings should not be disturbed for four or five days, when it is removed, and repeated if necessary. Nitrate of silver, or other caustic should not be used as the granulations are only superficially destroyed, leaving a necrotic area, which should be the object to be obviated. If the granulations are presistently sluggish, it is well to occasionally pack the wound with gauze, saturated with balsam of Peru, as this agent stimulates the regenerative capacity of embryomal cells without impairing the vitality of surrounding tissues. In my hands, most obstinate fistulæ have yielded under the treatment suggested, where previous antiseptic irrigation over estimated periods of time proved of no value.

THE GROWING NEED OF MEDICAL-POLITICAL ORGANIZATIONS.—

By Dr. John Punton, Kansas City, Mo.

I am aware that there are those in our profession who shrink at the thought of combining medicine and politics, regarding them as entirely incompatible and exceeding nauseating. But there never was a time in the history of medicine when such a mixture was more urgently needed than the present, and instead of attempting to render so much unappreciated gratuitous service to the public, let us recognize some of our own needs and spend at least a little time in doctoring ourselves, for in the language of Mr. Cleveland "Never did patient need your medical treatment more than the body politic now needs the watchful care of your patriotic and disinterested citizenship."

But the question is asked, what is the necessity for the profession entering the arena of politics? It would seem in the light of facts that no progressive physician will be guilty of such confession of ignorance, for time and space would not allow me to tabulate the various pathologic, bacteriologic, sociologic and other problems which are so intimately associated with municipal affairs in both state and nation, and as such are naturally referred for solution to whatever political party that happens to be in power at the time they present themselves. If the profession continues to ignore the agencies in the future as in the past which rule and govern the solution of these important problems, and leave them entirely in the hands of professional politicians, then we must expect them to be answered from a purely political standpoint, for the policy, "to the victor belongs the spoils" is as active and powerful to-day as ever, and is applied to them as well as other questions which come before them. Hence the injustice entailed by such a process of forced reasoning is rarely considered. But cannot the individual members which constitute the medical profession exert their influence to bring about such reforms without actually becoming politcians? In other words, is it necessary for us to concentrate our forces by the formation of a medical political organization? There is but one answer to this question. It is impossible to bring about the reforms needed short of organization. "United we stand, divided we fall," is as true in this case as in any other, and while we are quibbing over some petty jealouies or ethical error, the organized empyric forces, already in the field, conquer every contest and reign supreme. Conceding that organization is a growing need, the next question is, how can this best be accomplished? In New York, this problem has been successfully solved by the formation of a medical league. It is my opinion, however, that the various medical associations of the several states, counties and cities, are the proper places for its members not only to discuss medical politics, but organize themselves for the avowed purpose of carrying into effect the needed reforms which pre so plain to every thoughtful physician. I desire to congratulate the members of this glorious old State of Kentucky for the very wise manner in which you have dealt with quackery. How refreshing it is to read the headlines in a recent issue of the *Journal*. "No Itnerant Quacks in Kentucky."

With the assistance of Judge Thomson of Louisville, the osteopaths are not permitted to practice in this state. As a representative of Missouri, I desire to congratulate the medical profession of Kentucky, and especially your Board of Health, for the valuable services rendered the medical profession, as well as the State of Kentucky. We, in Missouri, so far have not been as fortunate as yourselves in ridding the state of itinerant quacks. Even the Governor of our state has recognized osteopathy as a legitimate med- icine and does not hesitate to exalt homeopathy by placing in their hands the oldest and largest insane hospital in the state. In addition to this the real function of our State Board of Health has been greatly curtailed, until to-day it is practically a figure head.

In California our friends are having asimilar experience with the homeopaths, for they have already petitioned the Governor fo that state to allow them recognition in the medical department of the universities. They also remind the Governor that during 87 years that the homeopaths have been in existence they have not added one single discovery in the vast field of scientifiic medicine. Indeed, all that homeopathy accedes to our uses it takes from the work of our own laboratories, clinicians and savants. In support of this, during the preparatiou of this paper, the catalogue of the Hahnemann Medical College came to hand. This, I take it, is one of the best of their representative schools, and yet I find that the the text books recommended under each department of medicine are taken from the regular school of medicine. For instance, under practice such familiar names as Flint, Roberts and Osler are recommended; surgery, Keen, Moulin, Park and Treves; obstetrics, Lusk; peadiatrics, Louis Smith; gnynæcology, the American text book; neurology Dana; physiology, Kirk;while under materia medica, strange as it may appear, the national dispensary is recommended, which as you know, contains no homeopathy whatever. In thus alluding to these facts it is not my desire to unjustly criticise or censure, butsimply wish to call attention to the great ueed of defending our own rights on the cause in which we are engaged.

The committee on nominations reported for the ensuing year the following names.

President—Dr. John Y. Brown, of St. Louis.

Vice Presidents—Dr. A. J. Ochsner, Chicago; Dr. A. P. Buchman, Ft. Wayne.

Secretary—Dr. H. E. Tuley, Louisville.

Treasurer—Dr. C. A. Wheaton, St. Paul.

The place of meeting was Nashville, and the date of the meeting was suggested as the second Tuesday in November. On motion the report of the committee was unanimously adopted.

TO KEEP THE FEET WARM—Cork soles have long been employed to keep the feet dry, and more recently an American invention has been adjusted to the sole of shoes to maintain proper ventilation and keep the feet cool. Now a German near Dresden has devised a kind of heatable shoe to keep the feet warm. Within the heel of the shoe, which is adequately hollowed out for the purpose, is a receptacle for a glowing substance similar to that which is used in the well-known Japanese hand-warmers. Between the soles of the shoe, embedded in asbestos, is placed a rubber bag which is filled with water. A system of circulation of the water around the glowing substance in the heel is provided for by which the water is maintained at a proper temperature, the current being produced by the varying positions and pressure of the foot while walking. The warmth given by this arrangement is said never to rise above 70° F. and will last about eight hours. The soles are slightly heavier than the common sort but not much thicker than that of the ordinary wet-weather shoe.—*Echoes and News.*

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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Secretaries of County Medical Societies in the Carolinas are asked to furnish condensed reports of their meetings to the JOURNAL.

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Editorial.

EXPERT TESTIMONY.

The newspaper accounts of the famous Leutgert trial, recently terminated in Chicago, present a striking example of the utter worthlessness of medical expert testimony under the present regimé. Leutgert was accused of murdering his wife and was on trial for his life. The evidence was entirely circumstantial and the prosecution called in medical experts to prove that certain bones found in a vat were human. One of these bones was a femur and the expert declared it to be a human femur, and that it belonged to a woman. The defence introduced other medical experts and the lawyers went to work to show that none of them knew anything at all about osteology, for bones of dogs and baboons were said to belong to humans. For several days this ridiculous tournament was kept up to the amusement of the public, the expense of the State, the confusion of the jury and the shame of the medical profession.

The trial by jury, whatever its effect may be, is intended to

Reviews and Book Notices.

Constipation in Adults and Children.—With special reference to habitual constipation and its most successful treatment by the mechanical methods. By H. Illoway, M. D., formerly professor of Diseases of Children, Cincinnati College of Medicine and Surgery; formerly visiting physician to the Jewish Hospital, etc., Cloth, royal octave, pp. 495, Price $4.50. The McMillan Co., New York, 1897.

The very great frequency of constipation, the great discomfort and the often very serious consequences to which it gives rise, and the difficulty attending successful treatment of the condition form sufficient excuse for the preparation of a volume upon the subject.

The first section of the work is devoted to the study of the anatomy of the intestines, the physiology of defecation, and the causes, symptoms and diagnosis of constipation. The author differs from those who considerin normal condition person whose bowels are evacuated only once in several days or weeks, even though it be a habit with them, and they do not suffer. Evacuations should occur once in three days at least or else they should be regarded as constipated. The latter part of this section of is devoted to a discussion of the consequences of constipation, numerous illustrative cases being cited. The second section, covering nearly two thirds of the volume is given up entirely to the study of the treatment of this condition. Careful directions are given in regard to the diet and daily habits of the patient. Then is taken up the treatment by massage, hydrotherapy and electricity. Under the head of massage is included Swedish movements, all being freely illustrated to show the modus operandi. Following this, treatment by medicines is considered. Under this head the whole group of cathartics is excluded, the only remedies recommended being nux vomica and physostignatis faba. After discussing general methods of treatment, each variety of constipation according to the cause is taken up. The last chapter contains a formulary for use in the constipation of infants.

Abstracts.

HEMATURIA: ITS RELATION TO MALARINAL IFECTION AND THE INGESTION OF QUININE.—In a paper on the above subject, read by Dr. Bransford Lewis, of St. Louis, before the St. Louis Medical Society, strong testimony relating to the injurious or even fatal effect of quinine administered in cases of malarial hematuria was given.

A number of Southern writers were quoted to the effect that they had never seen a case of malarial hematuria recover in which quinine has been given, and that they had never seen one die in which quinine had not been given.

By personal inquiry and through records of cases reported in in the journals during the last ten years, Dr. Louis had been able to collect the reports of four hundred and nineteen cases of which two hundred and seventeen had been treated with quinine and two hundred and two without it. Of the 217 treated with quinine, forty nine died and one hundred and sixty eight recovered, giving a mortality of twenty two and five tenths per cent. of the 202 cases treated without quinine, 22 died and 108 recovered, making a mortality of only ten per cent––less than half as great as that of the quinine cases. But even these figures, the author thinks, do not represent the true difference of mortality rate between them, which is probably still more favorable for the non-quinine cases; because the non-quinine cases are based on records of treatment both with and without the drug, whereas the quinine cases are from writers who had only used the one (quinine) form of treatment, reporting favorable terminations but failing, no doubt, to report many fatal ones that had occurred in their prac-tice.

Non-quinine treatment that had given the best results embraced the objects of elimination, support, and hemostasis without special regard to an anti periodic effect.

PERFORATING HARD AND SOFT SORES.—Coignet and Cade (*Lyon Méd.*) observed perforation in a case of true hard sore. The patient was a hard-worked and rather intemperate factory hand, aged 27. He had a tight congenital phimosis. Two months after contracting gonorrhœa a chancre developed on the dorsum of the prepuce. This sore, a few days later, began to ulcerate. On the third night after the process of ulceration had commenced the glans protruded through the hole thus made in the prepuce. Characteristic secondary symptoms soon appeared. The prepuce was removed, and the patient placed under anti-syphilitic treatment. In another case, where the patient was 22, the prepuce became swollen ten days after infection. A week later he noticed that there was a hole in the foreskin. It enlarged, and at the end of another week the glans protruded entirely through it. Over two months after infection Coignet and Cade examined the patient. The edges of the perforating soft sore were nearly healed, apparently without treatment; there were cicatrices of old soft sores on the glans. In the right groin were two small enlarged glands. No secondary symptoms developed, nor had the patient ever suffered from them. The prepuce was removed.—*The British Medical Journal.*

Anesthesia in Normal Labor.—At the sixth congress of Russian physician, Dr. Bakœmsky related his experience with fifty-three women, with normal labor, to whom he administered anesthetics. To forty-five he gave ether, and to eight chloroform. The investigations carried on partly by the aid of the tokodynamometer, and partly by other instruments of precision, showed that during the administration of ether the pulse and the respiration remained almost the same, and the contractile force of the uterus was increased; the duration of labor was shorter, in no instance was there albumin in the urine; the involution of the uterus seemed to progress more rapidly; in the new-born icterus was more rare, they lost less in weight during the first week. The experience with chloroform was not quite so favorable, as it somewhat slows the progress of labor. In conclusion, the author says that in ether we possess an ideal remedy to abolish the suffering in labor, and we should employ it much more frequently than we do. He is suprised that this view is making such slow headway among physicians.—*Amer. Medico-Surgical Bulletin.*

Microbes in Acute Rheumatism.—Singer, of Vienna (*Berl. klin Woch.*,) has examined 92 cases of acute rheumatism, and in a great number of patients has ascertained the presence of staphylococci and streptococci. He has examined the blood, urine, ynovial effusion, and various complications during life. In three necropsies he was twice able to find the same microbes that he found during life; in one of them the synovial effusion was sterile, though the walls of the synovial cavity contained bacteria; in the third case there were hæmorrhages in the periarticular tissue, and in these hæmorrhages he found groups of streptococci. Singer considers that the necropsies explain why arthritic effusions in acute rheumatism are found often to be free from microbes; in such cases the bacteria probably have their seat in the periarticular tissues only. Singer believes that these microbes are the actual cause of acute rheumatism, which shows its pyæmic nature by its relation to erythema multiforme, sorethroat, etc. He therefore does not accept the view that the action of salicylates is actually specific.—*British Medical Journal.*

THE TREATMENT OF CHLOROFORM COLLAPSE—Leonard Hill (*Treatment*) claims that by examining what effect change of position has upon the venous and arterial pressures, and using this as an index of vaso-motor tone, he has been able to show that chloroform is one of the most powerful and rapid depressants of vaso-motor tone that we possess. The cause of chloroform collapse is in all cases primary failure of the circulatory mechanism. There are two types of chloroform collapse:

1. In that occurring on primary anesthetization, the patient struggles violently and then passes suddenly into a condition of collapse. The author says that on immediately opening the thorax in all such cases the heart is always found to be in a state of paralytic dilatation. The pulse ceases earlier than the respiration.

2. The second type of collapse occurs when choloroform is administered slowly and struggling is not provoked. This type is apt to occur during prolonged anesthetization. The vasomotor mechanism becomes paralyzed, the blood stagnates within the splanchnic area, the respiration fails from anemia of the spinal bulb, and finally the heart fails also. The first type of collapse is sudden in onset, and is of the utmost danger to the patient. The second type is slow in onset, and is easily remedied by performing artificial respiration, and by placing the patient in a horizontal position, with the abdomen slightly higher than the heart. It is the first type of collapse which is of the

utmost importance to the anesthetist, and it is this type which has hitherto generally resisted the remedial efforts. The author finds that paralytic dilatation of the heart can be remedied in nearly every case by the following method:

Artificials respiration is at once applied, the thorax is rhythmically squeezed over the region of the heart, while the animal is placed in the horizontal position. If the pulse does not speedily return the animal is dropped into the vertical feet-down posture. By this simple means the heart, owing to the influence of gravity, is emptied into the splanchnic area; thus the dilatation of the organ is relieved. Artificial respiration is maintained throughout the maneuver. After a few seconds the animal is returned to the horizontal posture, and the heart is thus filled with a fresh supply of blood. If the pulse does not return, the maneuver is once more repeated. When the pulse has returned and the heartbeat has become efficient the artificial respiration can be discontinued, and after a short space of time the natural breathing will usually return, owing to the excitation of asphyxia. The arterial pressue is similarly improved by temporary asphyxia. During this period the pulse must be carefully watched, and artificial respiration renewed if there be any sign of failure.

In the first type of collapse Nélaton's method of inverting the patient head downward is worse than useless. The paralytic dilatation of the heart is thereby increased. That the heart is emptied by the vertical feet down position, and that it commences beating when emptied, can be observed with great ease on opening the thorax of an animal during the state of chloroform syncope. The author feels convinced that a saving of life will result (1) from following the rule of the Hyderabad Commission, that chloroform never be pressed during the stage of struggling, and (2) from employing the method of recovery deseribed above. The second type of collapse is relieved by the vertical head-down position (Nèlaton's method). It is equally relieved by the horizontal position and artificial respiration. As the anesthetist can never be sure which type of collapse he has to deal with, the author thinks Nèlaton's should never be employed. If we have to deal with the first type of collapse, Nèlaton's inversion is a fatal mistake; if the second type confronts us, recovery can be brought about by artificial respiration and the horizontal position.

Morphia is one of the finest drugs we possess for the maintenance of vaso-motor tone. Atropine, by stopping all reflex inhibition of the heart, maintains the velocity of the blood-flow during chloroform-inhalation.

From the results of these experiments upon animals, the injection of morphia combined with atropine should be of the greatest value in cases where chloroform-anesthesia is required. Dastre recommends the injection of 1-120 grn. of atropine sulphate, combined with 1-6 grn. of morphia hydrochlorate, twenty minutes before the administration of chloroform. It prevents the fear of the anesthetic and the shock that follows.---*Amer. Medico:Surg. Bulletin.*

SULPHATE OF POTASH AND HEPATIC CIRRHOSIS.—Lancereaux (*Bull. de l'Acad. de Méd.*) having been struck by the abscence of drunkeness in the subjects of cirrhosis, has investigated the influence of various alcoholic liquors in the production of cirrhosis. In 210 cases of cirrhosis examined by him in thirty-five years, 68 had drunk wine alone to excess, in 126 wine in combination with brandy, rum, or absinthe, in 12 wine and beer, and in 4 wine and cider, had been taken in large quantities. These figures clearly show that, in Paris at any rate, wine, and not alcoholic drinks generally, must be considered the antecedent of cirrhosis. Conversely in Brittany and Normandy, where little wine but much brandy is drunk, cirrhosis is rare. In Hayti, where a great deal of rum and arrack is consumed, hepatic cirrhosis is unknown. Lancereaux finds that the poisonous body in wine is sulphate of potash; in Paris plastered wines contain 4 to 6 grammes of this salt per litre, and three litres per diem was the average quantity taken by the cases he investigated. That sulphate of potash alone gives rise to cirrhosis he proved by feeding rabbits, guinea-plgs, and dogs with it. After surviving for six to eighteen months they died, and presented typical venous cirrhosis. While the general consensus of opinion expressed by those who have given alcohol experimentally to animals is that it sets up fatty degeneration in liver cells, but does not produce cirrhosis. It appears that there is some body other than alcohol in alcoholic drinks which gives rise to cirrhosis, and this Lancereaux believes is the salts of potash, especially the sulphates. Unfortunately an accurate chemical analysis of the stimulating drinks of various countries and of their aduleration is wanting. But it is not improbable that in Germany and England, where beer gives rise to cirrhosis, this beverage contains sulphate of potash. If it were not for its familiarity, the term "alcoholic cirrhosis" should be replaced by "drinker's cirrhosis" inasmuch as there is no reason to incriminate alcohol *per se* as cause. To prevent the occurrance of cirrhosis, the "plastering" of wine ought to be forbidden by law.—*British Med. Journal.*

RESECTION AND SUTURE OF THE TRACHEA.—Fœdert(*Wien Klin Wochen*). The following case is of great interest, particularly as it was followed by good results, and as we only meet with few reports on resection of the windpipe and the use of the circular suture. The case was that of a boy nearly six years of age, whose trachea had been servered with a knife below the cricoid cartilage. After a suture had been applied and a canula inserted, the boy was again able to talk on the fifth day after removal of the canula; dyspnea, however soon set in, and the canula had to be reinserted. The stenosis rapidly increased, and the author was unable to find any communication between the larynx and trachea, either by laryngosopical examination or by use of the sound.

The windpipe was then resected a little below the tracheal fistula; on searching for the upper end a greatly deformed tracheal ring was found below the cricoid cartilage, while the anterior wall of the remaining windpipe was contracted, in the shape of a funnel, and changed into rough cicatricial tissue in which no cartilage could be recognized. To obtain a normal upper lumen, the whole cartilage with the ligamentum cricotracheal had to be removed. The two ends gained by the re section were separated about three cm. To join them the windpipe was separated from the cicatricial tissue up to the point where lower tracheotomy had previously been done, when they were easily lifted out and joined by cat-gut sutures, which were passed through all the layers. After introducing Salzer's canula and suturing the soft parts, the head was firmly secured in a position leaning forward. No fever appeared; deglutition was performed without pain. Healing progressed undisturbed. After the removal of a few granulations along the suture line, on the inside of the larynx, respiration became free and the voice strong and clear.—*Pediatrics.*

ACUTE CROUPOUS PNEUMONIA IN CHILDREN.—Dr. Church (*Clin. Jour.*) draws attention to the diversity of symptoms and the difficulties of diagnosis. Pain in the head and belly, accompanied by vomiting, are among the earliest symptoms met with. Of these, vomiting is one of the most constant. Pain in the belly is, much more common than pain in the chest. There may be diarrhœa or constipation, and the malady may even simulate obstruction of the bowels. Cough is frequently absent altogether. Pyrexia is usually high. Delirium or drowsiness may be suspected. Physical signs are often delayed and may not make their appearance until the crisis is passed. A careful study of the respiration and pulse is considered by Dr. Church as one of the safest guides to diagnosis. In children the breathing is not only accelerated out of proportion to the pulse, but it is often characteristic of the disease, each respiration being accompanied by a grunting noise. Professor Henoch thinks that "many of the cases of recovery from meningitis, especially from tubercular meningitis, have been nothing but cases of pneumonia with cerebral symptoms which were wrongly diagnosed."

In cases where the vomiting is excessive, Dr. Church advocates frequent small doses of calomel until the bowels have been freely moved. In order to promote action of the skin he uses the old-fashioned acetate of ammonia.—*The Practitioner.*

THE TREATMENT OF WHOOPING-COUGH WITH THE SERUM OF VACCINATED HEIFERS.—Dr. Violi, of Constantinople, reported the Section of Medicine of the Twelfth International Medical Congress (*Gazette hebdomadaire de medecine et de chirurgie*) that he had used the serum of heifers that had been vaccinated in seventy-five places, taken at the time of the desiccation of the pocks, upon seventy-eight children with whooping-cough, from the twelfth to the twenty-eighth day of the disease. In all but four of them the attacks diminished, and in many of them they ceased in from eight to ten hours. The serum was administered subcutaneously the amount used is not stated.—*The N. Y. Med. Jour.*

A Six-inch Hat Pin in the Male Urethra.—Dr. Philip D. Bunce, in the (*N. Y. Med. Jour.*) reports the following interesting case. "R. T., forty-five years old, and the father of a family, came in considerable pain and gave me the following history. About two hours ago having considerable itching about the penis, he had taken one of his wife's hat pins and obtained relief by pushing it head first into the urethra. In some way which he could not explain, the pin slipped out of his fingers and went out of sight up the urethra. It had been necessary for him to walk quite a distance, and every step caused him pain.

On examination two drops of blood were seen on his shirt. The penis was in a state of semi-erection. The pin could be easily palpated, the head in the deep urethra, and the point about two inches from the end of the penis. An unsuccessful attempt was made to remove the pin, under cocaine, by passing a narrow-bladed forceps throug the meatus into the urethra.

One hand was now placed on the perinæum, where the pin head could be grasped, and the other hand bent the penis, so that by considerable pressure the pin point was forced through the skin, about one inch and a half from the end of the penis. The pin was now pulled out as far as its head and, by reversing the direction, was easily pushed, so that it was delivered head first through the meatus.

The pin was of the ordinary variety, with the head of about the size of a shoe button, and measured exactly six inches in length.

The man, when seen a week later, said he had not experienced the slightest pain of any kind after removal of the pin.

The Radical Treatment of Hernia.—Dr. Cazin, of Paris, at the International Medical Congress, read a paper, the joint work of himself and Prof. Duplay, on a new method of treating the sac in the radical cure of inguinal hernia. The method has two essentials: 1, The sac is preserved and is used for the purpose of making a solid cicatrix, forming a sort of organized stopper between the peritoneum and the transversalis fascia; 2, buried sutures are dispensed with, and this the authors consider a decided advantage when it can be done without compromising the solidity of the cicatrix. For suturing the walls of the hernial opening, they employ silver wire, which is removed on the sixth day. The operation is not suitable for all classes of hernia, for when there is a large opening into the canal some procedure like Bassini's must be employed for the reconstruction of the abdominal walls, and then buried sutures must be employed. The abandonment of buried sutures they consider a decided advantage, for when of silk these give rise to late infections which are exceedindly troublesome;when of catgut they are sometimes absorbed so readily that they do not remain long enough to serve for the formation of a firm cicatrix. The authors had operated upon thirty-three cases in two years with their method. The cure was without incident in all cases, and the relief afforded seemed to be permanent.

Dr. Corbin, of Jassy, read for himself and Dr. Vicol a report on two hundred operations for the radical cure of hernia done in the hospital of the fourth French army corps. Of these,one-hundred and ninety-eight were inguinal hernias, one was crural another umbilical. The number of patients operated on was one hundred and ninety. In most of the inguinal hernias the the procedure employed was that of Lucas Championnière. All of the patients survived the operation and in but twenty-one was there elevation of temperature after the operation. In three cases there was some deep suppuration. Since the operation there had been relapses in twelve cases. All of them occurred as a consequence of the heavy work the men had to engage in after leaving the hospital, and in nearly all the relapses there is a history of a special violent effort made at the time of the recurrence of the hernia.—*Polyclinic.*

Therapeutic Hints.

THE TREATMENT OF FRACTURES.

1. Unless a fragment is threatening to break through the skin, the fracture should never be reduced except by a physician, and then only when apparatus is at hand to keep the parts in permanent opposition.

2. Men carrying an injured person should not keep step as the jar to the wounded part is much greater.

3. Strychnia for shock, morphia for pain, but *no alcohol*.

4. Always give anesthetics for reduction of a simple fracture. It is better and easier to reduce and set compound fractures without anesthesia.

5. It is very rarely necessary to make a patient go through the double agony of "temporary" and "permanent" setting of the broken bones.

6. In setting fracture gentle rubbing of the ends will assist in getting rid of shreds of tissue which invariably are caught there.

7. Nowadays a surgeon will rarely be satisfied that a bone is properly set until verified by the X-rays.

8. Plastic splints, preferably plaster of Pasis, are surely the best apparatus when they can be applied.

9. Ambulant treatment is coming more into vogue. No simple fractures require constant confinement to bed, except of the innominata and upper third of the femur.

10. It is not necessary and sometimes very harmful to "wait for swelling to disappear" before putting on a permant dressing.

11. A well-applied splint with good apposition of fragments should not be removed too early. It is not necessary to apply massage early in ordinary cases.

12. Proper time for massage is two or three weeks after fracture of upper extremities and four or fiive weeks for lower extremities—if the bones are slow to unite firmly.—*W. I. Estes, International Jour. of Surgery.—Nashville Jour. of Med. and Surg.*

TINCTURE OF STROPHANTUS IN PLUMONARY EDEMA OF CHILDREN.—has been used with excellent success by Dr. A. M. Gregor (North London Hospital). In one case pulmonary edema suddenly developed in a boy seven years old suffering from chronic pleurisy and peritonitis. Digitalis produced no effect, when strophantus was substituted—at first one, then two drops every three hours. The symptoms rapidly improved and dissappeared. In the other case pulmonary edema made its appearance after scarlet fever in a girl nine years of age. In this case the remedy was exhibited every three hours, at first in two-drop doses, later in three drop doses; within twenty-four hours the patient' who had been suffering from complete anuria, began to urinate, diuresis became very copious, and with it the symptom of plumonary edema disappeared.—*Centralbl, f. Kinderheilkunde.—Pediatrics.*

EXPECTORANT AND SEDATIVE.---

℞—Syrup ipecac, 2 drachms.
Syrup tolu, 5 drachms.
Potassium bromide, 15 grains.
Brandy, 5 drachms.
Tilia water, 20 drachms.

A tablespoonful every other hour.

The mixture rarely causes nausea, and never vomiting.---*Med. Review of Reviews.—The Medical Age.*

HYPERTROPHY OF TONSILS:

℞---Iod. pur	0.05
Potas. iodid	0.1
Laudan pur	1.60
Glycerin pur	100.0

Mix. Sig.---Use as a paint, and gargle twice daily with a solution made by adding one-half a coffeespoonful to one half a glass of lukewarm water.---MOURE.---*Pediatrics.*

TO CURE ITCH IN TWO HOURS.—Employ fresh sulphuret of calcium made as follows:

℞—Sulphur (flour), 3 ounces.
Quicklime, 5 ounces.
Water, 2 pints.

Boil together till combined, then allow to cool and settle. Decant and preserve in hermetically sealed bottles.

Application.—Rub patient all over with soft soap for half an hour, then place in a tepid water-bath for another half hour. Next rub over with the solution and allow it to dry on the skin for a quarter of an hour. Complete by washing in the bath. —HIEMIMKX (Belgium) ---*The Medical Age.*

BALSAM IN THE TREATMENT OF BRONCHIECTASIS IN CHILDREN.—Molle d'Aubernas (*Loire médicale; Therapeutische Wochenschrift*) recommends the following:

℞—Eucalyptol	10 parts;
Creosote	20 "
Tincture of benzoin	50 "
Balsam of copaiba	80 "
Oil of sweet almonds	300 "

M—To begin with, an enema of thirty drops of this mixture, in a little milk, may be given, and the dose may be increased gradually to two teaspoonfuls. In a few days the patient gets used to the burning sensation that follows the injection.

THE PUBLIC SERVICE.

UNITED STATES MARINE HOSPITAL SERVICE.

For the two weeks ending October 9, 1867.

Kalloch, P. C., surgeon, to proceed to McComb, Miss., for special duty, Oct. 2, 1897.

Wasdin, Eugene, passed assistant surgeon, relieved from duty at Ocean Springs, Miss., and directed to proceed to New Orleans, La., and report to Surgeon H. R. Carter for duty, Oct. 4, 1897.

Magruder, G. M., passed assistant surgeon, to proceed to Sabine Pass, Texas, for special duty, Oct. 3, 1897.

To proceed to Houston, Texas, and await orders, Oct. 9, 1897.

Cobb, J. O., passed assistant surgeon, relieved from duty at Cairo, Ill., and directed to proceed to Jackson, Miss., Sept, 27 1897.

To proceed to Fontainebleau, Miss., for duty, Oct. 9, 1897.

Geddings, H. D., passed assistant surgeon, to proceed to New Orleans, La., and report to Surgeon P. R. Carter, for duty, Sept. 27, 1897.

Clark, Taliafero, assistant surgeon, to proceed to Cairo, Ill., for temporary duty, Oct. 2, 1897.

Granted leave of absence for 2 days, Oct. 6, 1897.

Promotion

Passed Assistant Surgeon Parker C. Kalloch commissioned as Surgeon Sept. 22, 1867.

Casualty

Passed Assistant Surgeon W. D. Bratton died at Sabine Pass, Texas, Oct. 2, 1897, of injuries contracted in line of duty.

THE NAVY.

For the week ending Oct. 15, 1897.

October, 9, Assistant Surgeon A. Farenholt, detached from the Vermont and ordered to New York Navy Yard.

October, 11, Surgeon C. G. Herndon, ordered on temporary duty at the Naval Museum of Hygiene.

October 12, Assistant Surgeon W. B. Grave, detached from Naval Laboratory, New York, and ordered to Mare Island Hospital.

October 13, Passed Assistant C. P. Bragg, detached from the Marion and ordered to the Adams.

Assistant Surgeon M. K. Johnston, detached from the New York and ordered to duty with the Vicksburg.

Assistant Surgeon R. Spear, detached from the Naval Laboratory, New York, and ordered to New York.

October 14, Sugeon C. Biddle, detached from marine rendezvous, San Francisco, ordered to Washington in charge of patient, then report at the Navy Department.

Miscellaneous Items.

IT HAD BEEN TAKEN OUT.---The following from Boston is on the authority of that bright and witty editor, Rev. Dr. Dunning. A well-known business man of the Hub was discovered by a friend to have his underwear inscribed with the legend, "I have had my vermiform appendix removed." Questioned as to his motive, he replied, "These are the palmy days of surgery. If a man faints on the streets or falls in a fit, he is rushed off to a hospital and his appendix taken out before he can recover consciousness. I have this notice conspicuously displayed, as I have been through the operation.---*The Medical Herald.*

The Tenth annual meeting of the Southern Surgical and Gynecological Association will be held in St. Louis, November 9, 10 and 11. The program issued by the Secretary, Dr. W. E. B. Davis, Birmingham, announces many interesting papers.

NECROLOGY.

DEATH OF PASSED ASSISTANT SURGEON W. D. BRATTON, U. S. MARINE HOSTITAL SERVICE.

The following is the announcement, issued by Surgeon General Wyman, of the death of Passed Assistant Surgeon W. D. Bratton, which sad event we noted in a recent issue:

"I have the painful duty of announcing to the officers of the Service the sudden death of Passed Assistant Surgeon William

D. Bratton, which occurred at Sabine Pass, Texas, on the 2d instant, under peculiarly distressing circumstances.

In the pressing need of medical officers for active work during the present yellow fever epidemic in the South, Passed Assistant Surgeon Bratton, though an invalid, and therefore on waiting orders, promptly volunteered his services to meet the emergency, and the tender was accepted in the spirit in which it was made. He was ordered to Sabine Pass to assume charge of Service matters relating to the quarantine service at that port, where he arrived and reported himself on duty the 28th ultimo. On the 1st instant he had been superintending the disinfection of a vessel and returning to the ship to reassure himself upon the work done, he fell through a ventilating hole, striking his head on an iron knee, producing concussion of the brain. He remained undiscovered for several hours, and when found was unconscious and remained so until death occurred, eighteen hours after the uufortunate accident.

William Du Bose Bratton was born in Fairfield County, South Carolina, June 23, 1860, the son of General John Bratton, of Winnsboro, in that State. His early education was acquired in Mt. Zion School, Winnsboro, and at Abbeville, South Carolina. In 1874 he was matriculated at the Carolina Military Institute at Charlotte, North Carolina, remaining two years, and then entering the University of the South at Sewanee, Tennessee, where he received the degree of B. S. in 1880, after a three years' course. He at once began the study of medicine, and was graduated at the Medical College of South Carolina, March 1, 1884, and for the year following was House Surgeon at the Charleston City Hospital.

He was commissioned as assistant Surgeon April 1, 1885, and assigned to duty at New York. His subsequent stations while in that grade were San Francisco, Cal., as medical officer of revenue cutter "Corwin" for service in Alaskan waters, and then for temporary duty at Port Townsend, Wash. He was commissioned a Passed Assistant Surgeon April 2, 1888, and again assigned to duty as medical officer on the revenue cutter "Bear" for service in Alaskan waters. In May, 1889, he was ordered to duty in command of the Service at Portland, Oregon, where he remained two years, and was then assigned to duty at

Chicago, Ill. In 1893, he was placed in command of the Service at Buffalo, N. Y., where he remained until January 9, 1894.

In the fall of 1893 he first became aware of the condition of health which gradually disclosed a tuberculous character, and after the Bureau had been officially informed of it, he was sent to Wilmington, N. C., for its favorable climate, where he remained several months, doing meanwhile temporary service at Delaware Breakwater quarantine, but later he was placed on "waiting orders," (January 1, 1895), taking up his residence in Arizona, and finally at Albuquerque, New Mexico, to obtain the advantages of the southwestern arid region. After a two years' residence there he reported, in March, 1897, his gradual return to a state of health, which justified him in asking for an early restoration to active duty, but further delay was advised in order that he might have the benefit of a longer residence, and, if possible, a permanent cure.

Passed Assistant Surgeon Bratton, during the period of "waiting" became much interested in the climatic treatment of consumptives, and wrote several reports on the arid regions of the southwest as the best locality for such work, recommending the establishment of a sanitarium in that section for the treatment of patients of this Service suffering from the disease.

His literary and scientific attainments were of a high order, and his studious habits and keen facilities enabled him to maintain in the Service a reputation for unusual professional knowledge and skill in practice. Officially, devotion to duty was always a paramount consideration with him, and his conscientiousness in respect thereto was a marked characteristic of his work.

Personally, he was of modest and reserved manner, yet frank and manly in his demeanor, and actuated by a high sense of honor in all relations with his associates. He was in every respect a noble officer.

Reading Notices.

DANGEROUS SPURIOUS IMITATIONS, So-called Coca wines which are a source of danger.---The attention of the medical profession is earnestly directed to the various dangerous decoctions masquerading as Coca wine. These decoctions are intended as meretricious imitations of the standard French preparation, "Vin Mariani," which has been so widely indorsed by and whose merits are so well known to the medical fraternity, that it would be superfluous to enter into any enumeration here of its virtures.

Investigation discloses that these so-called coca-wines are generally variable solutions of the alkaloid cocaine, in sweetened wine of a low grade, (artificial wines). Quantities of such so-called coca-wine have been seized upon by various Health authorities and destroyed. Any physician will realize the danger ensuing from the use of decoctions of such a character.

These spurious and dangerous preparations are having the effect of causing misapprehension and working an indirect injury to a really valuable drug, for the real usefulness and value of Coca, when conscientiously prepared and properly administered, have long since been recognized by the medical fraternity.

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The prescribed dose produces a feeling of buoyancy, and removes depression and mel- ancholy; hence the preparation is of great value in the treatment of mental and nervous ffections. From the fact, also, that it exerts a double tonic influence, and induces a ealthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain ersons to offer imitations of it for sale. Mr. Fellows, who has examined amples of several of these, finds that **no two of them are identical,** nd that all of them differ from the original in composition, in freedom rom acid reaction, in susceptibility to the effects of oxygen when ex- osed to light or heat, **in the property of retaining the strych- ine in solution,** and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed in- tead of the genuine preparation, physicians are earnestly requested, hen prescribing the Syrup, to write "Syr. Hypophos. **Fellows.**"

As a further precaution, it is advisable that the Syrup should be rdered in the original bottles; the distinguishing marks which the bot- les (and the wrappers surrounding them) bear, can then be examined, nd the genuineness—or otherwise—of the contents thereby proved.

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NORTH CAROLINA
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Original Communications.

SUGGESTIONS THROUGH THE PROFESSION TO INVALIDS SELECTING WESTERN NORTH CAROLINA AS A HEALTH RESORT.

By Dr. Charles W. Hunt, Brevard, N. C.

NATURE has given to this section the climatic elements necessary for the thorough renovation (so to speak) and building up of the entire nervous system, the healthy action of which is all important for the prevention, amelioration or cure of any affection with which, through our misfortunes ignorances and vices, and the ignorance of ages, the human family is afflicted.

While the locality has proven, by its beneficial climate, the wisdom of those eminent leaders in the profession who acknowledge and teach the benefits to be derived from a suitable climate, it is important to observe certain general laws as regards health and certain (so to speak) special laws or rules necessary for each individual climate; of these it is my purpose to write.

All so-called constitutional or systemic disease should not exist were we sufficiently conversant with, and obedient to the laws of health. There are many patients seeking relief from climate, the treatment of whose cases should have been directed to parent and grand-parent. The great strides and successes of preventive medicine have developed laws that warrant me in this statement.

Apologizing for this apparent digression, I beg to speak more especially of those seeking health by change of climate, temporary or permanent, and the unpremeditated arrangement of the words "temporary" and "permanent" is written exactly in order of importance to the majority of cases. A temporary stay in a given climate, while sometimes curative, generally proves only temporary if the individual is again exposed to the same deleterious climatic influences which caused or intensified the disease in the first instance, and, on the other hand, permanent change means permanent improvement.

Those predisposed to, or affected with, phthisis pulmonalis (consumption) find a change to a more genial climate is of the greatest consideration. I will not confuse the lay reader with a resume of the latest and well established opinions of the profession upon the bacilli tuberculosis, the cause of the disease when a suitable soil is found, and I do not desire to tresspass upon the physician by a useless recital of our knowledge upon this subject and its proper treatment by means of medicines, though I do desire to point out a few simple rules whereby patients can aid themselves by an intelligent co-operation with physicians, believing that no one should take his case into his own hands and trust entirely to climate.

Selection of Climate: After a certain mountain section is decided upon then a special spot (within this generally healthy territory) should be taken, according to topographical features, just as the observant farmer selects for his abode some particnlar spot more sheltered, warmer in winter, cooler in summer. This applies to the immediate county and town location after Western North Carolina has been decided upon, a location giving the most even temperature, and one, while admitting of abundance of fresh air and sunshine, is sheltered from the winds of winter and spring, which are very injurious to bronchial and pulmonary diseases. Surgery made little advance till the injurious nature of overcrowding was recognized, therefore do not select a place that has been overcrowded for years by those seeking health, where disease producing germs have accumulated for years.

The invalid has sought health upon the billows of old ocean; upon the mountain tops above the billowy clouds; beneath the whispering pines; in the land of flowers; and has sought it (and not in vain) in the arms of the rugged and picturesque mountains of the Land of the Sky.

For inherited tendency to disease or for disease not too for advanced a tonic and bracing atmosphere should be selected. Best average altitude is between 2000 and 3000 feet; great extremes in altitude should be avoided. For those past cure and special relief the mild air of Florida or Southern California should be selected.

The room occupied should be in a light, airy and sunshiny location in the house, above the first floor, well ventilated. Do not become a fresh air fiend but have at the same time plenty of air day and night. "Night-air" is more pure than "day air." Perfect comfort should be a guide in this particular and should in many other particulars, when aided by judgment.

The clothing of an invalid enjoying the tonic and curative influences of a mountain climate should be based upon *Comfort;* neither too much, which causes undue relaxation of the system resulting in excessive perspiration; nor too little, which allows undue chilling of the body, especially during moments of rest and exposure to the cool air of the mountains immediately after exercise in mountain climbing, etc. Silk or thin woolen underwear for summer, thicker for winter, also in summer time, for an afternoon outing, a thin wrap should be taken to be worn if home is not reached before night fall. This can be appreciated when it is remembered that during nearly every night in summer one sleeps here with comfort under one or two blankets.

Exercise should be taken regularly, increased as the strength increases, excessive muscular exertion and fatigue being avoided.

The effect upon appetite, digestion, assimilation, temperature and physiological reaction after exertion should be the guide to exercise. Walking, driving and especially horseback riding are to be recommended; a before breakfast gallop is especially good. Do not fear an early morning canter through the mountain mists neither is a mountain shower injurious if exercise is continued and heat of the body sustained till dry clothing is obtained.

When temperature is 101, or more, perfect rest and quiet should be enjoined; the nearer the normal the greater can be the exercise. Early hours for retiring and early hours for rising should be strictly adhered to. The fair devotee of fashion and pleasure having passed through a season of social dissipation, finding her lillies are losing their freshness, or her roses are fading, must retire in a spirit of penitence and obedience to the outraged laws of nature, reading with benefit a lesson from the birds upon early rest and rising, with increased health from each restful night. She must rise early and imbibe renewed health and life from each varied mountain peak, surrounded by the freshness of the morning, laden with the health giving ozone and the sweet breath of refreshed nature, as the busy humming bird with ceaseless wing, greets the golden rays of the morning while plucking life and sweetness from each flower and towering petal.

Diet: Ice-cream and iced drinks should be avoided, causing congestion of bronchial mucous membrane, arrest of healthful secretions and excretions of pulmonary tissues. Stimulants are useful short of undue physiological stimulation. Every article of diet that can possibly be taken and digested should be used. Patients should strive to increase in weight and thereby build up the power of resistance to the extension of disease and enable the system to "cure" any existing lesion. As to special articles of diet, each case is a law unto itself; generally speaking, patients should use cod-liver oil, *sweet milk* and *cream in abundance*, soft-boiled eggs, rare beef, beef extract, butter, chicken, all kinds of game, breads—wheat, graham and corn—junket, kumyss, mutton in various forms, milk-punch, malted milk, oysters, rice, the various preparations of beef juice, bovinine etc., pure corn whiskey (as indicated), in short every nitrogenous food; this increases formation of bloodred and white corpuscles, latter being very rich in leucocytes, required by the system in the formation of all animal life, and to aid health-forming tissues in building barriers to the progress of morbid processes. The various tonics most appropriate for each individual case, and digestants should be used to spur the appetite and enable the system to digest a liberal amount of food. A period of one hour of perfect rest should be allowed before and after each meal.

Rest.—Physical and Mental: It is not enough to have muscular rest, while the mind and nervous system are on a strain from study and worry. Sleep should be encouraged, and is all important. The bed-room should be well ventilated (as before mentioned.) An invalid should occupy the room *alone*, especially those havng a cough from whatever cause. This is necessary for the health of the invalid, nurse, wife or children. All expectorated matter should be immediatelysterilized or burned, as there is generally therein contained millions of bacilli.

To remarks on exercise must be added what might properly be termed lung gymnastics. The muscles of respiration, both of inspiration and expiration must be fully and frequently exercised, at least three times daily. The lungs must be emptied and filled by forced respiration, and in addition the inhalation of an appropriate antiseptic is advisable. The cough must be relieved if it prevents rest, though this must not be done at the expense of stomach and appetite. Out of door life, fresh air and regular exercise as before stated is indicated and absolutely necessary.

Transylvania County offers all that can be desired as to climate, scenery, mountains, valleys, rivers, and water-falls. A valley surrounded and protected by sheltering mountains constituting a magnificent semi-circle formed by the towering peaks of the Appalachian range, joining with the sky encircling crests of the Blue Ridge in one unbroken defence against "winter and rough weather."

The altitude offers the *best average.* Location is that nearest the vast forests of balsams, and the southern location accounts for the great abundance of aromatic pines dispersed through the forest.

Selected Papers.

APPENDICITIS IN RELATION TO DISEASE OF THE UTERINE ADNEXA AND PREGNANCY.*

By John B. Deaver, M.D., of Philadelphia, Assistant Professor of Applied Anatomy in the University of Pennsylvania; Surgeon-in-Chief to the German Hospital.

THE subject of appendicitis, with its fatality and many complications, and the close relationship which it may bear to contiguous organs and structures, cannot fail to be of particular interest to this body of obstetricians and gynecologists. You will no doubt agree with me that acute appendicitis is the most common, and one of the most fatal, of all acute intra-abdominal affections, and, furthermore, that its mortality is in a great measure due to a failure to make an early diagnosis, and to the character of the treatment instituted. The position which I have held, namely, to operate as soon as the diagnosis is made, I still maintain, assuming that this is done very shortly after the onset of the attack. I know that this course is attended by the least mortality. My experience in the operative treatment of this dangerous, treacherous, and fatal disease, embraces several hundred cases, and I am prepared to make the statement that I have never seen a human life lost when operation was performed immediately following the onset of the disease. While I am aware that to discriminate between cases, and to be able to determine from the onset which are operative cases and which will recover without operation, or to be able to defer operation with absolute safety for two, three, or more days, rather than to rush in, as some put it, and remove the diseased appendix as soon as the diagnosis is made, may be more scientific, yet I know positively that this course is taken at the cost of many human lives. When, therefore, it becomes a question of following the lines of theory or of experience, which teaches practical facts and which when instituted will bring practical and favorable results, the decision permits of no choice.

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*Read by title at the Tenth Annual Meeting of the American Association of Obstetricians and Gynecologists, Niagara Falls, New York, August 17-20, 1897.

The ultimate results of inflammation of this organ more than justify early operative interference. Let us consider for a moment some of the results of appendic inflammation. First and most important, because of the high mortality, is perforation of the appendix, with general peritonitis; next, perforation, with localized abscess formation, which if not evacuated early produces general sepsis, a tedious convalescence, a granulating wound, and in many instances ventral hernia or fecal fistula. Appendicitis followed by a large localized abscess means necessarily the destruction of a great deal of tissue which oftentimes Nature fails to repair, to say nothing of the loss of life when it occurs in the young or feeble. I consider the formation of a localized abscess, occuring as the result of appendicits, anything but the most fortunate culmination of the attack and for the following reasons: because the inflammation should not be allowed to reach that stage; that in the hands of the majority of operators it is an excuse to leave the appendix, believing that with the evacuation of the abscess they have accomplished all that can be expected. This practice not only offers an opportunity in too many instances for leaving behind an organ which is more liable to be the cause of subsequent and less favorable attacks, but also exposes the patient to the risk of an undiscovered secondary collection which in my experience is a frequent cause of death.

Before a body of operators, comprising the members of this Association, it would be presumptuous for me to draw a comparison between operation in the absence of, and in the presence of, pus. I may, however, bring to your attention some complications of pus-formation which I have observed. The presence of pus increases the danger of lymphatic infection. This is also true of infection through the portal system (pyelophlebitis) resulting in miliary abscess of the liver, and consequent death. The complications which may arise from an undisturded localized appendic abscess are its rupture into the bladder, thus occasioning an enterovesical fistula; rupture into a bronchus and evacuation by way of the mouth; rupture into the ascending colon, rectum or vagina, which is not to be considered a favorable termination and does not preclude the possibility of a recurrence of the inflammation; rupture into the ureter with evacuation of pus through the bladder. A complication which is not an uncommon sequence of the formation of a localized abscess is intestinal obstruction due to adhesions which have been formed in the process of localization. Again, secondary obstruction may follow the evacuation of an abscess, due to the subsequent contraction of its walls.

A septic phlebitis (phlegmosia alba dolens) is not an uncommon sequence of localized abscess formation. A condition of affairs which may arise as a result of a small collection which has remained undisturbed is a cheesy degeneration of the abscess wall, involving contiguous structures in the process. When the gut has been thus included an attempt to remove the degenerated mass will frequently bring to light a perforation of the bowel, often so large as to necessitate excision, enterrhaphy, or anastomosis. In operating for appendicitis the multiplication of the difficulties induced by pus-formation must prepare the surgeon to meet and handle any of the complications of abdominal surgery.

To recapitulate: the large mortality in appendicits, as I have previously stated, is the result of too conservative measures in the early stage of the disease. Surgeons whose experience in the treatment of appendicitis has been large, I am sure will to a man agree with me in this statement. To be brief, I have yet to see a human life lost when in an acute attack of appendicitis the appendix has been removed within six to eight hours after the onset of the disease, while on the other hand, I regret to say that I have seen many lives lost by adopting the so-called conservative methods, namely, opium to relieve the pain, allowing the bowels to remain confined, leeches, fly-blisters, turpentine stupes, any or all of which are not only useless but harmful. I cannot impress this fact too strongly as I have seen five deaths from appendicitis in as many days, in all of which cases I am morally certain that had the appendix been removed immediately after the onset of the first pain all the patients would have recovered.

The question naturally arises, Who is largely responsible for this high mortality? Is it our teachers? Personally, I feel that it is their fault. What is the alternative; I would suggest that our professors in the different teaching institutions should witness a number of operations performed early, and I know there no longer would be the list of skeptics there is now. This, too, would be a healthful diet for the so-called surgical critic who writes articles condemning too frequent operation. The last mentioned class is evidently wanting in experience; otherwise they could not but entertain different views.

The conditions in women which call for careful thought in differentiating between one or other of the diseases of the uterine adnexa and acute or chronic appendicitis, are the following:

1. *Acute Salpingitis.*—There frequently is a close relationship between acute catarrhal appendicitis and sight-sided acute salpingitis. and the symptons may closely resemble one another. The great points of difference, however, are the history of infection, the slight degrees of abdominal tenderness and rigidity,

the location of the pain, and the absence of vomiting, and in the case of appendicitis the pain migrating from the epigastric or peri-umbilical region to the iliac fossa, the decided tenderness and rigidity of the lower right quadrant of the abdominal wall, suddeness of attack, accompanied by vomiting, no history of infection, and the absence of signs by vaginal examination and the pressure of a palpably enlarged appendix.

2. *Pyosalpinx and Ovarian Abscess.*—The presence in the recto-uterine cul-de-sac of an inflammatory mass in intimate relation with the uterus, which renders it partially or completely immovable, and which may be clearly outlined by vaginal, bimanual, or combined vaginal and rectal examination, together with the history of a vagino-uterine infection, and the presence of septic fever, establish the diagnosis of pyosalpinx or ovarian abscess. The essential points in the differentiation between these two affections and appendicitis are the suddenness of onset in the latter, accompanied by vomiting, and the characteristic rigidity and tenderness following general abdominal pain.

Inflammation of the right ovary may be confounded with appendicitis, as it is attended by pain, tenderness in the right iliac fossa, nausea, and fever. It is, however, always accompanied by disturbances of the uterine function, is accompanied by the characteristic ovarian pain, and is demonstrable by vaginal or bimanual examination. The tenderness is never so intense on superficial palpation as in appendicitis and is not accompanied by a preceptibly enlarged appendix.

3. *Extra-uterine Pregnancy.*—The history in these cases is usually that of partial or complete cessation of the menstrual flow for one, two, or more periods, generally accompanied by other symptoms of pregnancy, with collapse supervening upon an attack of acute abdominal pain. The pain is long continued and paroxysmal, but not colicky. An irregular, bloody, vaginal discharge, generally lighter in color than the normal menstrual flow, and containing shreds of tissue, portions of the decidua, etc., is present. Vaginal examination will detect a tender and sensitive mass in the posterior cul-de-sac, unless the pregnancy be an abdominal one. In the majority of these cases there is a history of sterility for five or six years previous to the abdominal conception.

When the product of conception occupies the fimbriated extremity of the right tube, the points of differentiation are more difficult, owing to the close proximity of the lesion to the appendix, and to the negative result of examination *per vaginam* prior to rupture. Should the two conditions occur coincidently it will be well nigh impossible to differentiate between them. The chief points to be borne in mind, however, if such is not the case, are the history and the absence of inflammatory symptoms prior to the rupture of the extra-uterine sac and the presence of inflammatory symptoms in appendicitis.

4. *Suppurating Ovarian Cyst.*—An appendic abscess and a small suppurating ovarian cyst on the right side present some symptom in common which may give rise to difficulties in diagnosis. These symptoms are: Painful tumor in the right illiac fossa, which may be made out by vaginal, bimanual, rectal, and external examination; symptoms of septicemia; hectic temperature, and history of previous gastric and urinary irritation. The differences, however, are marked and may be distinguished by careful consideration. In ovarian cysts the onset is gradual and a history of infection may generally be elicited. The pain is constant and of a dull character; by pressure the significant "ovarian pain" may be produced, differing from the colicky and paroxysmal pain of appendicitis. The rigidity of the abdominal wall is not so marked as in appendicitis, while the tumor itself is more elastic, apparently having thinner walls and a more regular outline.

5. *Ovarian Cyst with Twisted Pedicle.*—An ovarian cyst with a twisted pedicle, gives, as a rule, a history of a slowly growing tumor, which is so frequently unaccompanied by pain that its presence has been unexpected until the accident occurs. The onset of the acute symptoms of a cyst with a twisted pedicle is sudden and is usually caused by excessive peristalsis of the intestines or by sudden changes of the position of the body, causing the tumor to revolve. If the twisting be complete enough to shut off the circulation, the walls of the cyst will rapidly become gangrenous and the patient profoundly septic, with localized peritonitis soon becoming general. Here, again, is seen a resemblance to an attack of appendicitis with abscess formation, but the difference in shape, elasticity, the slow growth, if noted, preceding the sudden onset, the difference in the character of the pain and tenderness, and the lessened degree of rigidity

should enable one of experience to distinguish between the two. If, however, for any reason it is impossible to make a differential diagnosis, I would advise the lateral incision as the one to be chosen, because appendicitis is so much more common an affection that the chances are in favor of its being the latter. If it is an ovarian cyst the lateral opening may be closed and a median incision made for its removal. The median incision for appendicitis is illogical, unwise, and in many instances will present anatomic impossibilities. Where the appendix lies behind the cecum and observes one of the northerly directions, if adherent, it will present difficulties in the removal through the ordinary incision. It is, therefore, plain to be seen how much more difficult it would be to attempt its removal through a median opening. These difficulties are greatly enhanced when there is pus formation, and further, the danger of peritoneal infection is greatly multiplied.

6. *Fibroid Tumor.*—Appendicitis has been confounded with a local inflammation of a portion of the broad ligament overlying an intraligamentous fibroid tumor. The main points in the differential diagnosis are the history of metrorrhagia, the presence of a growth detected upon vaginal examination, tenderness and pain, which is elicited upon abdominal palpation and is confined to the part of the wall overlying the mass.

7. *A varicose condition of the veins of the broad ligament* may simuchronic appendicitis. A differential diagnosis should be easy to make, however, because there is an absence of inflammatory symptoms, and a characteristic dull aching pain, with nausea, which disappears when the veins are emptied, as the patient assumes the recumbent position. Again, in chronic appendicitis there is a history of one or more acute attacks, with a palpably enlarged organ and the symptoms of chronic inflammation.

8. *Painful Menstruation.*—A condition which may be misleading in the differentiation of appendicitis, is the sudden onset of pain occurring in young unmarried women of a neurotic temperament at the ushering in of the menstrual period. The onset is sudden, the pain is paroxysmal, and is accompanied by nausea. There may be more or less rigidity of the lower abdominal walls, which is most frequently bilateral. The presence and the degree of the rigidity of the abdominal walls depend up-

on the amount of congestion of the ovaries, and whether one or both are involved. The pain, at first paroxysmal, is most severe during the first day of the menstrual flow. After this it may become continuous, and, in some instances, last during the entire period. The tenderness and rigidity corresponds to the amount of ovarian congestion. If both ovaries are involved the tenderness will be bilateral. The pain at at the onset differes, however, from that of appendicitis, being non-inflammatory and localized from the beginning, while in appendicitis there is general abdominal pain, which la.er becomes locali zed in the right iliac fossa, while marked intestinal symptoms are present.

Some women, during the climacteric, occasionally complain of symptoms resembling appendicitis. They suffer from localized pain in the right side, gastric and intestinal disturbances, and irregular temperature. As absence of the menstrual flow often exists, some difficulty may be experienced in reaching a correct diagnosis, particularly in those cases associated with obesity. A correct diagnosis as to the condition present may be established by careful inquiry into the previous history and by local examination, the latter means will demonstrate the absence of rigidity of the abdominal walls and no palpable enlargement of the appendix. The flushes, backaches, and mental symptoms incident to the menopause will clear up the diagnosis. The mere mention, however, of the nervous affection, with its ubiquitous symptoms, will suffice.

I recently met with a unique case which presented a typical history of acute appendicitis, followed by abscess formation. At operation the appendix was found in relation with the right ovary, to which it was bound by strong adhensions. The ovary was the seat of an abscess which had evidently been infected by the perforated appendix.

Appendicitis and Pregnancy.—Pregnancy complicating appendicitis forms one of the most serious conditions which may come under the consideration of the surgeon. Ordinarily, appendicitis involves the risk of life. Under this condition, however, the lives of both mother and child must be taken into consideration. It is claimed by some obstetricians that this (appendicitis) is an infrequent occurrence as a complication of pregnancy. While this may be the case, it is of such great importance that I believe, from its rarity, it should receive even more earnest consideration on account of the disastrous results which are likely to follow the formation of an abscess of appendic origin at any peroid near the completion of the term of gestation. When we consider that the gravid uterus occupies the abdomen to a large extent, and that there is a likelihood of the uterus forming a portion of the abscess-wall, involving the risk of miscarriage and and subsequent shrinking in the size of the uterus, and the consequent likelihood of adhesions being torn and the escape of the contents of the abscess into the general peritoneal cavity, it is easy to imagine the risk in allowing such a condition of affairs to occur. In addition to the likelihood of breaking up adhesions following the emptying of the uterine cavity, there is equal danger of peritoneal infection. If the adhesions have become organized so that, owing to fixation, contraction of the uterus fails to occur after miscarriage, *post-partum* hemorrhage may result, the arrest of which would be attended by unusual difficulties.

Women who present the history of previous attacks of appendicitis and complain of local pains and distress in the right iliac fossa, with all the symptoms of chronic appendicitis conjointly with pregnancy, should, in my opinion, be relieved of a chronically diseased appendix in order to avoid the likelihood of suffering from a condition of affairs as above outlined. Although in many cases the condition may not go on to the formation of pus, still the great uncertainty which hangs over chronic disease of the appendix, and the indefiniteness as to the ultimate outcome, when complicated by pregnancy, make it imperative that we should not be too conservative, and thus endanger the life of the patient.

A question may arise as to the differential diagnosis between peritonitis from a perforated appendix or ruptured appendic abscess and peritonitis resulting from endometritis following absorption, miscarriage, or labor at full term. The principal points of differentiation are the history of sudden onset, accompanied by nausea or vomiting, and pain, rigidity, and tenderness in the case of appendicitis, while in the latter there is a history of uterine infection prior to the inflammatory invasion of the peritoneal cavity, as well as an absence, early in the history of the case, of localized rigidity and tenderness, which is diffuse in purulent peritonitis.

The rupture of the appendic abscess or perforation of the appendix may be followed by a temporary cessation of the more pronounced subjective symptoms previous to general septic peritoneal infection. This may be accompanied by shock. In puerperal peritonitis the symptoms appear slowly and are progressive and without amelioration.

The symptoms of appendicitis complicating pregnancy are those of uncomplicated appendicitis, although there may be vomitthroughout the entire period of gestation, not associated with evidence of an inflammatory condition. What is true of appendicitis in general is also true when it is associated with pregnancy. The likelihood of referred pain, not necessarily conconfined to the region of the right iliac fossa, is also true when complicated by pregnancy. The diagnosis is rendered more difficult when pregnancy is advanced and the abdomen is filled with the uterus and its contents. The ability to elicit rigidity of the recti muscles is marked on this account, although tenderness will be more pronounced when pus is present. The cases reported of appendicitis complicating pregnancy I believe, without exception have presented a history of previous attacks of inflammation of the organ in question.

Appendicitis, associated with or complicating pregnancy during the early months of gestation, is not as serious by far as when it occurs later. The danger of involvement of the uterine wall, as a part of the abscess wall, when such is present, is in distinct relation with the elevation of the uterus from the pelvis. The danger of miscarriage increases also as pregnancy advances for the same reason. Changes occur in the placenta when the uterine muscle is included as a part of the abscess wall, especially if the placental attachment corresponds with that portion of the the uterine wall forming a portion of the abscess wall. It has been conclusively shown in several instances that degeneration of the placenta has followed abscess formation. In one case the placenta had under-gone partial calcareous change, and miscarriage followed the evacuation of the abscess. The calcification was noted after the explusion of the after-birth.

There may be some doubt created in these cases from the fact that the patient has had disturbance otdigestion, with nausea, and vomiting. This condition, however, should not be confounded with nausea and vomiting at the first onset of appendicitis, as this is associated with evidence of inflammation. A primary acute attack of appendicitis in a pregnant woman might be mistaken for an approaching miscarriage. In the latter instance, however, the symptoms are not ushered in by severe abdominal pain, and as a rule there is no nausea attending the onset of local pain.

Acute appendicitis complicating the latter months of pregnancy is a far more dangerous condition to deal with. The appendix, if holding any of the southerly or easterly directions, is bound to be in relation with the uterus, and if pus be present the uterus is readily included in the mass of lymph thrown out to wall off the forming pus. Here lies the danger in appendicitis if it is allowed to go on to pus formation. If the appendix is removed before pus is formed, there is a decreased likelihood of miscarriage, and a lessened possibility of peritoneal involvement, adhesions, and peritonitis.

A serious question arises after pus has formed and the uterus is included as a part of the inner wall of the abscess cavity. We must face two important considerations: first, the likelihood of infecting the peritoneum primarily, and second, whether it is proper at the time of evacuating the abscess cavity to induce a miscarriage, or to allow Nature to take its course, and run the chance of avoiding an abortion. If we choose the former alternative and evacuate the uterus, after emptying the abscess cavity it would seem as if the surgeon would be in a position to control the possible infection of the peritoneum by the tearing loose of the adhesions to the uterine wall following the contraction of this organ, and by a proper disposition of gauze prevent infection of the cavity. If we are to choose the other alternative and leave the fetus *in utero*, then there exist a double menace to the future welfare of the patient—a probable infection of the peritoneum, a possible miscarriage, or the likelihood of carrying a dead child, with the attending risk of uterine infection, and the danger of septic endometritis, and peritonitis.

The salient points which I particularly wish to bring to your attention I will summarize in the closing paragraph of this paper.

The many difficulties of diagnosis between disease of the uterine adnexa, pregnancy, and appendicitis, and the probability of their co-existence in the same case, bring us face to face with the general rule that "he who opens an abdominal cavity must be prepared to meet any or all the complications which may arise in this most complex portion of the human anatomy." The first and most important point is the necessity for an early diagnosis, because the good results of an operation for appendicitis depend upon the time of operation. The danger increases in direct ratio with the progress of an attack. In women who are liable to become pregnant and who have had an attack, or attacks of appendicitis, the appendix should be taken out in order that the dangerous complication of pregnancy and appendicitis may be avoided. This is particularly true if an attack of appendicitis supervenes upon pregnancy. The latter condition does not contra-indicate operation under the circumstances, but rather, on the other hand, makes operation more imperative. Another point is one based upon a rich personal experience, covering both operative and non-operative cases. It is that the number of patients with appendicitis who become perfectly well, patients who do not suffer during the interval between attacks, and who are not subject to the certainty of future attacks, are so extremely rare that the question of curative treatment resolves itself *into the time of operation.—Med. News.*

THE ETIOLOGY AND TREATMENT OF ACUTE NEPHRITIS IN CHILDREN.

By A. Robert Taff, M. D., Charleston, S. C., Demonstrator of Anatomy in the South Carolina Medical College.

AN experience covering a number of years in the treatment of diseases of children has led to a belief that the generally accepted idea of the acute infectious fevers being mainly responsible for the occurrence of acute nephritis in children is an erroneous one; that a great number of such cases do occur in which it is impossible to trace a history of acute infection. To record these instances of nephritis as "causative factor unknown," when, to my mind, it is possible to explain the cause of the disease, seems hardly a logical course.

Among the causes may be cited: (1) Improper food and hygienic environment; (2) hereditary syphilis and the inherited tendency to tuberculous disease; (3) inherited weakness of the kidneys. That improper food and hygiene play a prominent part may be assumed from the fact that such affections are much more common among the poor than among the well-to-do. Though the children of the former are more often exposed to infection, the relative number of cases of infective disease occurring in the two classes is not sufficient to account for the difference; while, on the other hand, the dietetic and hygienic conditions are wofully dissimilar. Examples of the affection under consideration are comparatively rare in the rural districts, where the food and environments are better and the parents more healthy. Under such circumstances cases occur in about equal porportion in the two classes mentioned. These patients have usually presented a history of repeated attacks of diarrhea, and the fact that the urine frequently contains an excess of indican indicates fermentative processes in the intestinal canal. That abnormal alimentary changes often stand in the relation of cause to effect in the nephritis of children seems to be proved from the fact, that such patients do better on a properly regulated diet than on any other form of treatment, the dropsy disappearing, the bowels becoming regular and the urine normal.

The changes in the intestinal contents give rise to a toxin or toxins which act injuriously upon the kidneys, just as do the toxins of the infective fevers. Thompson explains this action by attributing to the poison an effect upon the general health followed by a change in the density of the blood, which in turn modifies the rate of osmosis so that albumin is filtered through the kidneys. A solution of albumin injected into the rectum of a dog will pass almost unaltered through the kidneys. It appears to be a rational conclusion that if an infant is placed upon an albuminous diet, which of course it cannot assimilate, that an albuminuria, continuing during the employment of such a diet, will occur.

According to Yeo, the ingestion of too great a quantity of albuminous material necessitates the excretion by the kidneys of so large an amount of nitrogenous waste that a temporary functional hyperemia of the organs in question is excited, and this leads to a slight leakage of albumin from the blood. Thus it is seen, that given an improper diet to begin with, there exists the first factor in a chain of events which may ultimately lead to organic disease of the kidneys.

The victim of inherited syphilis or of the tuberculous diathesis is apt to develop nephritis. This is especially so among the negroes—a fact well-known to Southern physicians—and particularly applies to those having an urban environment. Both of these diseases act in a manner analogous to that of the infectious fevers. Other cases have come under my observation to which no causative factor could be assigned; but the family history would show one or two near relatives who died of nephritis. Some persons certainly evidence a marked tendency to albuminuria from slight dietetic errors, which in time may be followed by structural lesions of the kidney, and in children, on account of the age and an undeveloped digestive system, this condition could easily be brought about.

The treatment, of course, depends upon the cause. Should the history elicit evidence of the presence of the toxin of an infective fever, the aim should be to eliminate the poison from the system. This is accomplished by promoting physiologic action of the kidneys, and for this purpose our most effective means is a properly regulated diet. The same principles are true in the case of syphilis or tuberculosis, although in the former, of course, the specific treatment of the disease would be applied as well. Milk, modified to suit the exigencies of the case, is the best means we have for the accomplishment of the purpose. Heart stimulants and diuretics are sometimes necessary, though administered as a routine practice they do more harm than good.

I append a brief account of a few cases, and, although my efforts have not always been successful, I attribute the failures not to incorrect methods, but to the impossibility of carrying out the treatment thoroughly in many instances, and to the fact that the disease had often passed to an advanced stage before the patient came under observation

Case I.—W. J., negro, aged two years and nine months. Family history good: no history of infectious fever. The examination revealed general edema. The urine was supposed to be diminished, but it was impossible to get total amount; specific gravity, 1028; albumin present; urea, six grains to one ounce;

indican present, though not in excess. A diet was ordered, which consisted of modified milk, fruits, gruel, etc. The child gradually improved, and finally passed from observation, when things were doubtless allowed to continue as before. Called to see the child two months later. Coma complete. Administered digitalis and nitroglycerin hypodermically; no reaction. Child died within a few hours.

Case II.—R. H., female, light mulatto, aged twelve years. Had been under treatment by various physicians for about two months. General dropsy. Almost constant headache. Visual abnormalities, such as floating particles in the air. etc. Mother died from nephritis and father from tuberculosis; no history of infectious fever. Urine: Amount twenty ounces; urea, seven grains to one ounce; albumin present in large quantities. Patient very anemic. Medication, cod-liver oil and syrup of the iodid of iron. Slight improvement. Occasional convulsions, and finnally death ensued during an attack.

Case III.—H. S., negro, female, aged eight months. History of repeated attacks of diarrhea, and symptoms of syphilis. General edema present. The mother was ordered to nurse the child and inunctions of mercury followed by iodid of potassium were prescribed. Child improved steadily, and at present appears to be perfectly well.

On consulting Quain's "Dictionary of Medicine," I find that views identical with mine are held by Stokins and Sir George Johnson. These, while detracting from the originality of the ideas presented, coming from such eminent authority add greatly to the weight of the argument.—*Med. News*

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Secretaries of County Medical Societies in the Carolinas are asked to furnish condensed reports of their meetings to the Journal.

All communications, either of a literary or business nature, should be addressed to, and any remittances by P. O. Order, Draft or Registered Letter, made payable to Robert D. Jewett, M.D., P. O. Drawer 825, Wilmington, N. C.

Editorial.

FOOT-BALL.

The annual epidemic of casualties from foot-ball has commenced. On October 26th a powerfully built young man of nineteen died in a New York hospital from a fracture and dislocation of the sixth cervical vertebra received in a game of foot-ball, and early in the present month, the "star" player of the University of Georgia was slain and another player seriously injured in an encounter with a team from the University of Virginia.

We earnestly advocate the encouragement of athletics among young men and also young women, and especially is this necessary for students. Every college should be provided with a well equipped gymnasium and field sports should also be encouraged. An hour or two spent daily in the gymnasium would be of immense benefit, especially to hard students, not only by improving their physical development but in putting their minds in a more healthful and receptive condition. Moderate, regular exercise is helpful; spasmodic, violent exertion is harmful and dangerous. The "rush" in a game of modern foot-ball requires the players to exert themselves to their utmost; they must strain every nerve to penetrate the opposing line, the members of which are taxed to their utmost capacity to resist the attack. So dangerous are these scrimmages that the players now try to protect themselves from accidental and *intentional* blows by armor which falls only a little short of the coat of mail of the middle ages.

The game is not one of skill or science, for it is pure unadulterated brute force that wins the battle. The very men who need especially the physical training through which the players pass are the ones which are studiously avoided in forming the teams. Only those of fine physique are desired, and they are not likely to apply themselves so diligently to their studies that their bodily health will be endangered. It is not our place to discuss the question as to the wisdom of permitting young men who are sent to college at considerable expense by their parents and sometimes by the taxpayers, absenting themselves from their studies to travel for weeks from town to town and state to state to play foot-ball. Our object is to enter an absolute protest against the game as a sport which has no redeeming features. It is brutal, for there is seldom a game in which one or more players do not have to be carried from the field: it is dangerous to life and limb, as the yearly records of dozens of deaths and scores of serious injuries will demonstrate; it is unmanly as any one must admit who has seen the heap of writhing human forms struggling in the dust and dirt after the manner of fighting beasts.

The lower house of the Georgia legislature has just passed almost unanimously a bill prohibiting in that State all match games of foot-ball and games to which an admission fee is charged The bill was passed without discussion. Whether or not the game is prohibited by legislate inactment, we consider it certainly the duty of Boards of Trustees of all colleges to prohibit the game absolutely. Let the students indulge in sports less dangerous and more becoming young gentlemen.

Reviews and Book Notices.

Annual of the Universal Medical Sciences and Analytical Index.—A yearly report of the progress of the general Sanitary Sciences thoroughout the world- Edited by Charles E. Sajous, M. D., and Seventy Associate Editors, assisted by over two hundred corresponding Editors, Collaborators and correspondents. Illustrated with chromo-lithographs, engravings and maps. In five royal octavo volumes. The F. A. Davis Company, Philadelphia. 1896.

We are pleased to note that there has been a very great improvement in the preparation of this valuable work, the present issue being far ahead of all preceding ones. The abstracts have been made much longer so as to convey more fully the author's ideas. The subjects are arranged in logical sequence so that the reader can compare the opinions of various writers upon a given subject and be better prepared to make his own deductions. Where a subject has been left incomplete of where the authors views need modification footnotes have been added by the editor in chief and associate editors. A very valuable addition has been made in the shape of an analytical index in which the latest treatment of all diseases is briefly given. This will prove a useful volume to be kept upon the table of the busy practitioner to which he may quickly turn. It is provided with references to the main body of the work where the subject will be more fully discussed. A general index is also provided. In fact nothing seems to have been left undone to make this issue complete and invaluable to the physician who desires to keep in touch with the rapid advances being made from year to year in his profession. Improvement has been made also in the style of typography. The price remains the same.

Transactions.—Medical Society of the State of New York, for the year 1897.

As usual this volume is full of interesting and instructive matter, there being no less than forty-six papers, most of them from men of well known ability. There are twelve papers from as many authors on the Relation of Impure Water to Disease, and the cure and prevention of the latter. These make especially useful reading. Then there are five valuable papers devoted to an Obstetrical Discussion concluding with an extended general discussion of the papers read. This volume is one of the most interesting the Society has published.

Abstracts.

HYDROTHERAPY IN CHILDREN.—Guttmann, of Breslau(*Der Kinderarzt*) says that probably most physicians who have adopted the hydrotherapeutic treatment as an addition to their curative agents, have followed the same course and made their first experiments with this treatment with the diseases of childhood. Numerous reasons for this may be found. In the first place, diseases of children usually constitute the greater portion of a young doctor's practice. There are still greater advantages present in the treatment of children, especially as regards hydrotherapy. For one thing, the complicated technique of hydriatic treatment is much simplified in its application to children, and can be much easier studied and applied.

On account of the smaller size of the child the procedures, as packs, application to the thorax, etc., demand only little time and trouble; the necessary auxiliaries, like toweling, sheets, tubs are on account of their smaller dimensions much easier procured for the child than for the adult; assistants are only rarely required. Compare only, for example, the great difficulties to be encountered in bathing a seriously ill adult at his home—how he must be taken out of bed, and carried back again with the assistance of a number of persons; how he must be held in the tub; the laborious manner of procuring the large quantity of water necessary, and, finally, the difficulty of finding a bathtub, with the simple conditions for bathing a child.—*Pediatrics.*

BACTERIOLOGICAL INVESTIGATION OF 312 CASES OF SURGICAL INFECTION.—Curry (*Boston Medical and Surgical Journal*) reports the following as the results of his investigations.

In 115 cases of abscess the streptococcus was found much more frequently than is usual. Pure infection occurred in 39 per cent., the staphylococcus aureus in 41 per cent., and the albus in about 10 per cent. He accounts for the large percentage by the fact that the cases were severe enough to be taken into the hospital wards, a greater percentage being found in the ward cases than in the out-patient department, where the cases were not severe enough to require admission.

The number of cases examined were found to contain the following forms: streptococcus pyogenes, 56; staphylococcus pyogenes aureus, 52 times; staphylococcus albus, 29 times; bacillus pyocyanus, 4 times; micrococcus lanceolatus, 2 times; bacillus diphtheriæ, 1 time; baccillus typhi abdominalis, 1 time; gonococcus, 1 time; amœba coli, 1 time; undetermined bacteria, 3 times.

Three cases of carbuncle had pure cultures, staphlococcus aureus.

Six cases of pustules, pure infections, staphylococcus; four cases staphylococcus aureus; bacillus diphtheriæ, one; bacillus pyocyanus, one case.

In six cases of furunculosis the aureus occurred in four; the streptococcus in one; the pyocyanus in one.

In three cases of felons the aureus occurred pure.

In thirty-five cases of cellulitis the streptococcus was found in nineteen, the aureus in sixteen, the albus in seven, the pyocyanus in three, the micrococcus lanceolatus in two, the megatherium bacillus in one, and undetermined bacilli in two. The streptococcus produced the severest cases.

In two cases of erysipelas the streptococcus was found pure.

One case of dermatitis had streptococcus and albus.

Of six cases of bubo five were pure and one mixed—one was streptococcus, one aureus, and the albus in three; the mixed infection was albus and streptococcus.

One case of acute vesiculitis contained gonococci.

Two cases of osteomyelitis of the tibia and one case of acute periostitis each had the staphylococcus aureus.

In six cases of pyosalpinx the streptococcus occurred in one, the aureus in one, the micrococcus lanceolatus in one, and the gonococcus in three.

The cases due to the gonococcus and micrococcus lanceolatus made good and more rapid recoveries than the others. The streptococcus died of septicæmia.

Three cases of endometritis showed pure cultures of streptococcus.

One case of peritonitis showed the micrococcus lanceolatus and the colon bacillus.

In one case of gumma, where the skin was unbroken, cultures made from an incision showed aureus,due probably to infection from the skin.

Two cases of conjunctivitis—one due to the albus and streptococcus; the other, severer, to diphtheria bacillus.

Ulcers of the leg showed mixed infection. Those containing bacillus pyogenes fœtidus were all extremely sluggish.

Fifty cases of appendicitis were examined. In most of these cases there was abscess-formation. The cultures were taken immediately from the abscess cavity upon the opening of the abdomen. Where there was no abscess the culture was taken from the stump of the appendix. There were twenty-eight cases in which mixed cultures were obtained, twenty in which pure cultures were found, and two showed no growth. Of the entire number, twelve patients (24 per cent.) died.

The streptococcus occurred in fifteen, the aureus in one, and the colon bacillus in forty six.

Of the twelve fatal cases, the cultures taken at the time of operation showed seven pure colons, in three streptococcus and colon, in one colon and undetermined bacteria, and in one no growth occurred.

The study of these cases brings out the fact that the absence of the streptococcus from cultures taken at the time of operation where there has been perforation is of negative result. That it may be an etiological factor is shown by three cases quoted, in which at the time of the primary operation no streptococci were found, but subsequently they were obtained, once at the autopsy and twice at secondary operations. It is probable that in the presence of the large number of colon and other bacteria usually present in such cases the streptococcus could not grow.

The results of bacteriological investigations of appendicitis are far from being satisfactory. The study of these cases simply emphasizes the fact that the presence of the streptococcus is usually attended with symptoms of the severest type. There is a great variability in the streptocci found here as well as in other inflammations. They may cause but slight disturbance, but are far more liable to result in general peritonitis or septicæmia. It must be born in mind that in cases of perforation and abscess-formation the absence from cultures of pyogenic cocci is of negative value.

Thirty cases of otitis media showed twenty-four pure and six mixed infections. The conclusion to be drawn from the study of the cases is that the pyogenic cocci, especially the streptococcus, produce the severest forms of inflammation of the middle ear. While the pneumococcus may produce very severe inflammation and involve the brain or its coverings, still, in the absence of pneumonia or other complications, the case tends to recover rapidly.

In eighteen cases of empyema the streptococcus occurred eight times, the pneumococcus nine times, the staphylococcus aureus once.—*Amèrican Journal.*

GENERAL MANAGEMENT OF CHRONIC NEPHRITIS.—Frank Overton (*The Medical Compend*) states that with the subsidence of the cause of acute nephritis the kidney returns to its normal condition. Chronic nephritis tends to perpetuate itself.

When the kidneys are unable to do their work, some of the energy of the other organs of the body is directed to this purpose, thus impairing digestion, assimilation, elimination and malnutrition results. Inert waste products are not fully oxidised (urea), resulting in the excessive production of uric acid, creatinin, xanthine and other irritants. This calls for more work from the already overburdened kidneys and establishes a vicious circle. Without the primary fault of the kidneys, disturbance of digestion and assimilation may bring about a chronic nephritis. This is exemplified by the moderate and constant user of alcoholic liquors. The constant use of alcohol impairs the oxidation of the albumin of the blood. Suboxidation results in the formation of irritating products which develop nephritis or aggravate preëxisting nephritis.—*Buffalo Med. Journal.*

INTESTINAL ANASTOMOSIS BY MEANS OF A NEW PATTERN OF DECALCIFIED BONE RING.—Ball (*British Medical Journal*) describes a new pattern of decalcified bone-ring, by means of which end-to-end anastomosis can be rapidly and simply performed and yet perfect security obtained from the dangers which not infrequently follow the use of mechanical metal devices.

The following are the prominent indications which the author believes all such devices should fulfil and he believes his model secures:

1. Sufficient surface of each end of divided intestine should be opposed in order to obtain a firm band of adhesion.
2. No leakage should be possible along the line of union.
3. No great pressure should be made by the appliance used on the gut outside the junction which might endanger the vitality of the intestinal wall.
4. No undue narrowing of the lumen of the bowel should result from the operation.
5. The method selected should be capable of rapid application; this obviously becomes a question of great importance in cases of multiple resection.
6. In cases where the intestine above the obstruction is much dilated, while that below is contracted, the procedure should allow of as even and uniform adjustment as is possible with tubes of unequal calibre.

The introduction of the Murphy button marked an epoch in intestinal surgery, and its use has in the author's hands been attended with most excellent results; but so many cases have occurred with retention of the button or of extravasation when it is separating, either from insufficient adhesion together of the ends, or from sloughing due to tension of the gut over the instrument, that he has given up its use.

The decalcified ivory or bone-ring which he has devised differs in some essential points from those already in use. They are made in three sizes, which are sufficient for ordinary cases. The centre of each is perforated to allow of the passage of intestinal contents; the upper and lower ends are smoothly rounded off, while around the circumference a deep groove is turned, wide enough to allow involution of the cut edges of the intestine while keeping the peritoneal surfaces in tolerably close contact. A considerable undercutting of this groove provides accommodation for any surplus of involuted intestine. The chief feature in the application of this ring, however, is the fact that a continuous lacing suture connecting both portions of the intestines is passed loosely through the entire circumference of the divided ends before the ring is placed in position. The suture is passed from the outer to the inner aspect on one end and from the inner to the outer on the other. When the circuit is complete the free ends should be opposite each other. The loops are now separated at one point and the button slipped in, and then by gently pulling the suture, loop by loop, as you would the lace of a boot, it is gradually tightened into the groove of the ring, at the same time drawing in and involuting the cut edges of the intestine and bringing their peritoneal surfaces into contact. The opposing serous surfaces are now united by a series of sutures passed parallel to the line of union on alternate sides. The author believes this method can be as rapidly applied as any, and is free from all danger of leakage. Some of the bottons are made with different calibres on either end for the anastomosis of a larger into a smaller portion of of the bowel.

THE FALLACIES OF X-RAY PICTURES.—Dr. Edward A. Tracy, of Boston, calls attention (*Jour. Amer. Med. Asso.*) to the erroeous impressions that may result from radiographs, and that the ends of justice may be thwarted thereby. In all x-ray pictures there is distortion due to the fact that the rays emanate from a point and are, therefore, not parallel. Then the size of the pictures are affected by the distance between the Crooke's tube and the object, and also by the distance between the object and the sensitized plate. The nearer the object to the tube and the further from the plate the larger the resulting shadow. He introduces radiographs of the same hand, one taken with the palm next to the plate and the other with the back of the hand to the plate. In the former the metacarpal bone of the thumb being nearer the plate,appears smaller in proportion to the other bones than is the case in the latter position. He also introduces two pictures of the same hand showing the fallacies that may arise from the position of the tube in relation to the object. In the first of these the metacarpal bones are shown thicker than in the other and with spur-like exostotic deposits which are absent in the other picture. He has in his possession a radiograph of a normal wrist which closely simulates a Colles' fracture and which is due entirely to the position of the tube. As x-rays have already been admitted as evidence in some courts it is well to bear in mind these conditions that may give rise to rrors.

LEPROSY AND HAWAIIAN ANNEXATION.—The Hawaiian Islands have long enjoyed the unenviable distinction of being the seat of the most active leprous centre of modern times, and the proposed annexation of these islands by the United States has given a special interest to the question of leprosy. In an article in the November number of the *North American Review* Dr. Prince A. Morrow, of New York, discusses the sanitary aspects of the scheme. As he remarks, "in view of the fact that ten per cent. of the Hawaiian race are affected with leprosy, it becomes a serious question as to what will be the effect of the absorption of this tainted population upon the health interests of this country."

The article gives many facts of interest from a demographic point of view. Reference is made to the extraordinary depletion of the native population, which in a little more than a century has diminished from four hundred thousand to less than thirty-five thousand. Prominent among the causes which have led to this rapid decay and death of the native race Dr. Morrow places the introduction of diseases peculiar to civilization, which, transplanted to this virgin soil, have exhibited a malignancy and virulence unknown in older communities.

Thus, the mortality of our whooping-cough and measles, introduced in 1849, was extraordinary, almost every case terminating fatally. The ravages of small-pox were simply frightful; in the epidemic of 1853 more than half the native population of Honolulu died from this disease. It is a noteworthy fact that at the present time, since the natives have acquired the partial protection of hereditary immunity, these same diseases no longer exhibit a virulent type.

After a brief account of the introduction of leprosy, its remarkably rapid dissemination, and the measures employed by the government for its suppression, a careful study is made of the results of the system of segregation adopted by the board of health. "What," he asks, "has been the result of thirty years' crusade against this giganic evil which is slowly sapping the life-blood of the Hawaiian people? Is leprosy on the increase or in process of extermination? Taking the records of the leper settlement as a basis of comparison, there would seem to be no hopeful signs of its extinction. In the first twenty years of its establishment to January 1, 1886, 3076 lepers were sent to the settlement; in the next ten years 2,049 were admitted. This large increase of admissions may not be due to an actual increase in the number of lepers in the islands, but to more active and vigorous methods of segregation. Again, in the first mentioned period the number of lepers in the settlement ranged from 200 to 800, the average being about 500; in recent years the number has varied from 1,000 to 1,200. Notwithstanding the optimistic view of the health authorities that leprosy is on the decrease, the fact remains that the anual consignment of lepers to the settlement shows little diminution in number. This yearly increment of fresh admissions which goes to recruit the rapidly dying population of Molokai is made up of previously undiscovered cases. All the indications point to the existence of a vast deal of latent leprosy, weich, as the disease develops into a recognizable form, must continue for many years to come to furnish a constantly recurring series of subjects for the leper colony."

In addition to the 1,200 lepers at Molokai Dr. Morrow computes that there are two or three times as many at large in whom the disease is latent or in incubative stage, yet sure to develop. "Each of these lepers is a source of danger to all with whom he may come into intimate or prolonged contact. That the disease is contagious there is the most abundant and conclusive proof. Upon no other possible ground can be explained its remarkable dissemination in the islands. The most incontrovertible evidence of its communicability is found in the fact that many foreigners from countries where lerosy is unknown and whose antecedents are free from any possible leprous taint have contracted the disease. Tha. the disease is spreading among the foreign population is shown by the fact that in the first twenty years of the leper settlement only about one per cent. of the lepers were foreigners; in recent years this propostion has increased to five per cent. The statistics of the leper settlement by no means convey a fair indication of the actual number of foreigners who have become lepers, as foreigners showing signs of the disease are given the privilege of laaving the country, so that, as a rule, only the poorer and more destitute are committed."

In considering the practical question of the danger to the health interests of this country involved in Hawaiian annexation, the writer thinks that no great danger is to be apprehended from the immigration of Hawaiian lepers; although many in their desire to escape Molokai, might come. "In the event of annexation it would be idle to think of confining leprosy to the islands, or rather excluding it from this country, by quarantine measures. In its earlier stage leprosy defies detection and no system of quarantine has ever been devised which would exclude the importation of a disease so little manifest on ordinary inspection as leprosy; only the advanced cases could be arrested." In the writer's opinion the principal danger would come from the establishment of more intimate commercial relations and the opening up of new enterprises inviting capital and labor and, consequent thereon, the large influx of Americans into the islands and their exposure to contact with the tainted population.

This increased tide of travel and communication would undoubtedly create conditions favorable to the general dissemination of the seeds of leprosy in this country—the only question is whether the soil found here is favorable to their germination and growth. He thinks that certain climatic and other conditions exert a marked inhibitory influence upon the development of the disease. In the dry, cool climate of our northern and northwestern States leprosy does not appear to take root and flourish, but rather to die out from natural causes, while in the warm, moist, more tropical climate of Louisana and other southern States the conditions are favorable to its development. He concludes as follows: "Experience shows that in all countries where leprosy has become epidemic its advance is insidious; it spreads slowly, and before the health authorities awaken to a realization of the danger it has made such headway that its further progress can not be arrested. All of these facts should be fully considered and their importance from a sanitary point of view carefully weighed by our legislative authorities before deciding upon the annexation of Hawaii with its leprous population."—*N. Y. Med. Jour.*

ANTITOXIN IN DIPHTHERIA.—Dr. Henry R. Slack, of La Grange, Ga., gives in the November issue of the *Atlanta Medical and Surgical Jonrnal*, his results as obtained from the use of antitoxin in the treatment of five cases of diphtheria. In four cases microscopic examination confirmed the clinical diagnosis and in the remaining case there was no doubt about the nature of the disease, a laryngeal paralysis remaining. Improvement followed promptly on the administration of the remedy and there was no mortality. Immunizing injections were given to six or seven children living in the houses where the cases occurred with the result that all escaped. One child who was not immunized contracted the disease. Dr. Slack prefers the preparation of Park, Davis & Co., to other preparations because it is put up in hermetically sealed bulbs and can be obtained in a fresher state. In the cases immunized there were no untoward symptoms, not even a rash.

Therapeutic Hints.

THE PROPER TIME TO ADMINISTER MEDICINES.—Alkalies should be given before food. Iodine and iodides should be given on an empty stomach, when they rapidly diffuse into the blood. If given during digestion, the acids and starch alter and weaken the digestion. Acids, as a rule, should be given between the digestive acts, because the mucous membrane of the stomach is in a favorable condition for the diffusion of the acids into the blood. Acids may be given before food when prescribed to check the excessive formation of the acids of the gastric juice. By giving it before meals the osmosis stomachward of the acid-forming materials is checked. Irritating and dangerous drugs, such as the salts of arsenic, copper, zinc and iron, should be given directly after food, except where local conditions require their administration in small doses before food. Oxide and nitrate of silver should be given after the process of digestion is ended; if given during food, chemical reactions destroy or impair their special attributes and defeat the object for which they were prescribed. Metallic salts, especially corrosive sublimate; also tannin and pure alcohol, impair the digestive power of the active principle of the gastric juice, and so should appear in the stomach during its period of inactivity. Malt extracts, cod liver oil, phosphates, etc., should be given with or directly after food, so that they may enter the blood with the products of digestion.—*Med. and Surg. Rep.*

Boils.—Dr. L. Duncan Bulkley, in a recent issue of the *Clinical Review*, recommends the following treatment of boils:

"The objects aimed at by the treatment are, (1) soothing and protecting an inflamed area; (2) exclusion of air; and (3) a slight antiseptic action. For this purpose a moderately thick layer of absorbent cotton is taken, several times the size of the inflamed surface: for a medium sized boil a piece one by two inches, with the fibers running the long way. Upon the center of the cotton a considerable mass of the following ointment is spread by means of a spatula, and this is then laid over the boil, and held in place by strips of adhesive plaster across the ends, but not passing over the boil. The ointment referred to is generally composed about as follows: ℞ Acidi carbolici gr. v.–x., ext., ergotæ fld. ʒ j.–ʒ ij., pulv. amyli ʒ ij., zinci oxidi ʒ ij., unguent. aquæ rosæ ℥ j. M. Ft. unguent. The relief often given by this dressing is very marked; the ointment soothes and protects the irritated surface, while the layers of cotton take up any outside friction. If comfortable, and unless disturbed, this dressing remains untouched twelve or more hours, when it is removed and a freshly spread piece immediately reapplied. If there has been any discharge the surface may be very gently cleansed with absorbent cotton, but I do not allow any squeezing. In many instances with proper internal and general treatment the boil aborts, and subsides without discharging; when this does not happen it ruptures spontaneously in a relatively short time, and I practically never find it necessary to incise it. This treatment I use in all stages of boils, keeping the ointment on until the boil is quite healed. If other boils form I direct it to be applied early and by this means they are frequently aborted."

Eucain Combined with Cocain.—By combining eucain with cocain we secure a valuable anesthetic with the advantages of both and none of the inconveniences of either, according to the *Journ. de. Méd. de Paris.* Eucain is the methyl ether of methyl-benzo-tetramethyl-*y*-oxypiperidin-carbonic acid, and is a white crystal substance soluble in water, alcohol, ether, chloroform and benzine; melts at 104 degrees C; is not decomposed by boiling like cocain. Its solutions are consequently not affected by sterilization. Its anesthetic action is more durable than that of cocain, while it is not toxic. Its effect on the pulse is to retard it while cocain accelerates it. A good formula for the combination is? Hydrochlorate of eucain, hydrochlorate of cocain, aa 20 centigrams; boiled distilled water, 20 grains. For hypodermic injection 1 c.c.—*Jour. Am. Med. Asso.*

Miscellaneous Items.

During the past year England has given, through public collections, about $4, 000,000 for charitable objects.

There were 82 applicants for the two appointments as police surgeons at an examination recently held in New York.

We are in receipt of a unique and useful pocket case from the Antikamnia Chemical Co , of St. Louis, filled with their valuable preparations.

The Philadelphia Polyclinic advetises for a bacteriologist to teach pupil physicians and do the usual laboratory work of a hospital—salary $100 per annum and 50 per cent. of the pupils' fees. Who'll take it?

The expense of conducting Monte Carlo, the great gambling hell of the world, was during the past year 2,000,000 francs to the Prince of Monaco; 1,000,000 francs for salaries: 8,000,000 for orchestra and sports; 100,000 to ruined gamblers; 100,000 for prevention of suicides; and yet thirty five persons took their own lives during the year.

The corner stone of the new Bellevue Hospital Medical College was laid November 13th, with appropriate ceremonies. The stone was laid by Lewis A. Sayre, M. D., LL. D., Emeritus Professor of Orthopædic Surgery, after which the order of exercises was continued in the Lecture Room of the Carnegie Laboratory, being addresses by Dr. London Carter Gray, Rev. Roderick Terry and Dr. John S. Billings.

A French Surgeon Arrested for not Disinfecting His Instruments.---Dr. Laporte, who is known to many Americans tourists as having spent ten years of his professional career on board the French line of transatlantic stemers as ship's surgeon, has been arrested for preforming an operation upon a lady with instruments that had not been properly disinfected. It is true that the patient has been ill of blood-poisoning, but until his arrest few people even in the medical profession were aware of the existence of any law exacting the disinfection of a surgeon's instruments before he used them. The offense is a technical one, and is punishable by two years' imprisonment. The Parisian hair-dressers and barbers are up in arms against the Prefect of Police, who is endeavoring, on the demand of the government hygienic counsel of the Department of the Seine, to enforce an equally peculiar law providing for the cleansing and disinfection of combs, razors, powder puffs, brushes, sponges and scissors before use on each client, the object of this grandmotherly regulation being to prevent the propagation of microbes and germs of disease. The Parisian barbers declare that they have neither the time nor the inclination to obey the order, and that sooner than conform thereto they will strike and leave the male portion of the population of the most elegant metropolis in the world to go unshaven and unshorn. It is felt there that while there is a certain amount of justice in the arrest of Dr. Laporte, the authorities are going too far in endeavoring to enforce the regulations concerning the barbers, whom it is morever injudicious to antagonize, since these shops and establishments constitute the scene of so much political discussion and gossip. ---*The Medical Herald.*

Reading Notices.

IF IT'S A
PILL
MADE BY
W.R.Warner&Co.
IT'S
SOLUBLE

"If it's a pill made by William R. Warner & Co. it's soluble." There's only a few words in the above sentence, yet they are words which will impress all who read them. The theme is not a new one. The name "Warner" has long had the word "solubility" intimately associated with it. While we congratulate Messers. Wm. R. Warner & Co. upon the perfecpreparations bearing their name, we cannot but state that we do not see why they should not be perfect. Forty-one years in business constitutes a period, during which a progressive house should be able to give to the profession perfect preparations. The pills made thirty years ago and exhibited at the American Medical Convention, in Philadelphia, proved to be as perfect and soluble as the day they were made. The following is suggestive that Messers. Wm. R. Warner & Co. have been very successful.

Liberty, Ohio, June 6th, 1896.

Messers. Wm. R. Warner &. Co., Philadelphia.

Gentlemen;—Last winter I unearthed a small vial of your Aloin Granules that by chance had been stowed away for *twelve years.* Having always used your Aloin Granules in my practice I of course used these, and as far as I could determine, *they were as efficient as the day they were made.* I tried them on myself several times with results as good as could be wished for. I have kept a few as a curiosity. They are O. K.

Yours truly,
J. H. Adair

Notwithstanding the large number of Hypophosphites on the market, it is difficult to obtain a uniform and reliable Syrup. "Robinson's" is a highly elegant preparation, and poseseses an advantage over some others, in that it holds the various salts, ncluding Iron, Quinine, and Strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

Backache.—It is with pleasure that I give you my experience with Sanmetto. Mr. B., age forty nine years, was a sufferer for years from backache, caused from inflamed and overworked kidneys. The pain was so great at times that an opiate had to be given to relieve it. I put Mr. B. on Sanmetto, teaspoonful three times a day. He has never complained of his back since. This has been three months ago.

Gold Hill, Ala. J. Harvey Bledsoe, M. D.

DOCTOR:—Your library is not complete withou the Hypnotic Magazine. Cost of this handsome monthly, including premium book on Suggestive Therapeutics is only one dollar ($1.00) a year.

THE PSYCHIC PUBLISHING CO.,
56 5th Avenue, Chicago.

BUFFALO LITHIA WATER

Disintegrates and breaks down Urinary Calculi, both the Uric Acid and Phosphatic Formation, and other Varieties as well.

ANALYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

NEW YORK, December 3, 1896.

Dr. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

Dear Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection containing a number of fragments, and also the three boxes, each containing a single Calculus, mentioned in your letter as discharged by different patients while under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of each specimen, and designated them alphabetically.

One of Calculi from collection marked "A" was 5/16 of an inch in diameter, of an orange color, and on section exhibited a nucleus surrounded by nine concentric layers of a crystalline structure. On chemical analysis it was found to consist of **Uric Acid** (colored by organic substances from the urine), with traces of Ammonium Urate and Calcium Oxolate. A fragment of a broken down Calculus from the same collection was found to consist of **Uric Acid.**

One of the fragments taken at random from the collection marked "B" which was still more disintegrated than the preceding one, proved on analysis to be composed chiefly of **Uric Acid** and Ammonium Urate, with a trace of Calcium Oxolate.

The contents of the boxes marked "C" consisted chiefly of whitish Crystalline materials. On microscopic examination they exhibited well defined and prismatic crystals, characteristic of "Triple Phosphate." On chemical analysis they were found to consist of Magnesium and Ammonium Phosphate (triple phosphate), Calcium Phosphate, Calcium Carbonate a trace, Sodium and Potossium Salts in traces, Uric Acid and Urates none, Calcium Oxolate none, Organic debris in considerable quantity, and matters foreign to Calculi.

The fragments of Calculi in the collection marked "D" were numerous, and of sizes varying from small fragments to 7/8 inches in length, 5/16 inches in width and 5/16 inches in thickness. Some of the fragments were white and others were gray in color. On chemical analysis they were found to consist partly of the variety known as "Fusible Calculus," Ammonium and Magnesium Phosphate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in traces, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly spherical in shape, consisting of Crystalline layers from 3/8 to 1/4 of an inch in diameter. They were of a brown color, and on analysis were found to be chiefly Uric Acid, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,
R. OGDEN DOREMUS.

Analyses F, G and H, omitted for lack of space.

Water in Cases of One Dozen Half-Gallon Bottles, $5.00. F. O. B. Here.

SOLD BY ALL FIRST CLASS DRUGGISTS.

THOS. F. GOODE, Proprietor, - - Buffalo Lithia Springs, Va.

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NORTH CAROLINA
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Robert D. Jewett, M.D., Editor.

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ANALYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

NEW YORK, December 3, 1896.

Dr. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

Dear Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection containing a number of fragments, and also the three boxes, each containing a single Calculus, mentioned in your letter as discharged by different patients while under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of each specimen, and designated them alphabetically.

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A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XLI WILMINGTON, DECEMBER 5, 1897. NO. 11.

Original Communications.

MYOMECTOMY.

BY AUGUSTIN H. GOELET, M. D., Professor of Gynecology in New York School of Clinical Medicine, etc.

THE mortality of hysterectomy for fibroids of the uterus has been so greatly reduced during the past few years by increased operative skill and improved technique that it has become popular, and the possibilities of myomectomy have been lost sight of. It is by no means uncommon to see the fibroid uterus with normal adnexa removed where it would be possible and perfectly feasible to enucleate the tumors from their bed in the uterine wall and save the uterus and appendages. Such procedures are unjustifiable and must be looked upon as a most unnecessary sacrifice of organs, the importance of which to woman's well-being is often too lightly estimated.

Though it is easier and sometimes involves less risk to remove the entire organ than to enucleate successfully many of these tumors, we should consider the ultimate result and what it means to the patient. We should therefore choose the more conservative operation and save the uterus and adnexa when possible. It will not be possible in some cases because the location of the tumors make them inaccessible, or the adnexa may be hopelessly diseased. Yet it can be done in a large proportion of the cases which come under the observation of the surgeon. It has been demonstrated that it is possible in favorable cases to remove successfully by enucleation not only one but all sessile and interstitial growths which may be detected in the uterine wall and that the hypertrophied uterus will gradually regain its normal condition, and that it may subsequently become a useful functionating organ. Interstitial growths situated deeply in the uterine wall even if they encroach upon the uterine cavity may be removed in this manner though it is better not to enter the cavity when it is possible to avoid it because of the increased risk of sepsis. That small nculei may be overlooked and left behind is no argument against the removal of tumors which may be detected. Their subsequent development would be slow if their growth were not arrested by the operation which will give the patient many years of comfort free from the burden of her tumors.

Myomectomy may be done not only in all cases of pedunculated subperitoneal growths but for sessile, interstitial and large submucous tumors as well. The latter when large and not pedunculated are more readily and more safely removed by abdominal section than through the cervix. When however, the adnexa are hopelessly diseased or the tumors have undergone degeneration and the uterine wall is involved, myomectomy is not feasible and the whole organ should be removed. Likewise in some cases the growth has attained such a size that the uterus is no longer a seperate and distinct organ; then a hysterectomy is the only alternative.

Small nodules may be removed by vaginal section either posteriorly or anteriorly to the cervix according to their location but where these tumors have attained any considerable size their extirpation can be more easily and more safely accomplished through an abdominal incision.

The method of procedure is to deliver the uterus with tumors through the abdominal incision when this is possible, and protect the peritoneal cavity and intestines by a rubber dam or pads of sterilized gauze, and a rubber ligature is placed around the cervix. When the organ cannot be thus be delivered, the intestines must be walled off from the field of operation by means of broad pads of gauze.

Pedunculated tumors are removed by making a flap incision on either side of the pedicle near its attachment to the uterine surface, stripping this down and severing the pedicle on a level with the surface of the uterine wall. The vessels supplying the tumors will be usually found in the flaps. They are secured, tied with catgut and the flaps are brought together with Lembert sutures of fine silk or chromicized catgut. Any redundancy which prevents neat coaptation is trimmed off.

Sessile and interstitial growths are removed by a longitudinal incision opening the capsule of the tumor which is then shelled out with blunt scissors or the handle of the scalpel. The vessels are secured and the cavity from which the tumor has been re moved is closed from the bottom with buried sutures of fine chromicized catgut, taking care to avoid leaving spaces where blood or serum may collect and retard union. The peritoneal margins of the wound are brough together neatly with Lembert sutures of fine silk or catgut. When the uterine cavity is opened the closing sutures should extend down to but should not include the mucous membrane.

The removal of large submucous fibroids is accomplished in the manner as removal of the fœtus in Cæsarian section. The uterus is delivered through the abdominal incision, the peritoneal cavity is protected by a rubber dam, a rubber ligature is placed around the cervix and an incision is made preferably in the anterior uterine wall from a point near the fundus to the vesico-uterine fold, opening the cavity. If the tumor is pedumuculated the pedicle is severed close to the surface, and bleeding is controlled by a continuous catgut suture which approximates the margins of the mucous membrane.

If the tumor is attached by a broad surface it is peeled off by means of the finger or a blunt instrument. Hemorrhage is controlled by packing the cavity with iodoform or plain sterile gauze which is made to project through the previously dilated cervix into the vagina. This and subsequent contraction of the uterus will be effectual.

If the tumor projects into the cavity but is buried in the uterine wall the mucous membrane covering it is incised, the capsule laid open and it is shelled out with blunt scissors or the handle of the scalpel in the same manner as similar growths on the peritoneal surface. Instead of closing the cavity from which the tumor is extirpated, it is better to pack it and the uterine cavity with gauze which is subsequently removed through the vagina. This controls the bleeding and serves the purpose of drainage as well.

The incision in the uterine wall is closed by deep interrupted sutures of chromicized catgut, which inlcude the peritoneal and the muscular structure down to but not the mucous membrane.

These operations are always preceded by a thorough curettage and disinfection of the uterine cavity which is then packed with sterilized gauze so as to lessen the chance of sepsis if the cavity is opened.

When drainage of the peritoneal cavity is required after any of these operations, it may be secured by making an opening through Douglas' *cul de sac* into the vagina and inserting a rubber tube or a strip of gauze before the abdomen is closed.

Myomectomy requires greater operative skill and involves more risk than hysterectomy, both on account of the increased liability to hæmorrhage and sepsis, but this may be readily overcome by careful operative technique. The advantages which the operation affords is more than an offset for the increased risk which it involves, since the patient's generative apparatus is preserved though she is relieved of the burden of her tumors and the uterus may subsequently become a useful functionating organ.

Selected Papers.

DIAGNOSIS OF YELLOW FEVER.

By John Guitéras, M. D.,
Professor of General Pathology and Morbid Anatomy, University of Pennsylvania, and Temporary Acting Assistant Surgeon, United States Marine-Hospital Service.

WHEN ordered by the Government to inspect points in the South as a yellow fever expert, I have assumed it to be my duty, not solely to report upon the diagnosis of individual cases, but to form an opinion as to the actual state of the outbreak, whether it be possible to localize it and stamp it out; or, on the other hand, whether the outbreak is beyond control of our means of sanitation. I have even deemed it possible, when yellow fever was not found in one of the Southern States, to predict whether it was likely to break out or not during the summer. The diagnosis, then, from my point of view, is of two kinds, namely, as to the epidemic status of the locality, and as the individual cases.

A careful study of the conditions existing in Cuba during the earlier part of the present summer made it very probable that yellow fever would extend from that island to this country. There probably has never been so much yellow fever in Cuba as there has been during the present season.

DETERMINATION OF EPIDEMIC STATUS.

First, as to the epidemic status: There are several features characteristic of the community where yellow fever is prevailing that make the fact known to an experienced observer, even when wilfully or otherwise its presence is denied by the physicians and local authorities. Without seeing a single case of the disease I have often made up my mind as to the existence of yellow fever from the reports of prevailing sickness given by the physicians.

In the first place, many cases of acute febrile attacks of mild character are reported and an attempt is made to show why they can not be cases of yellow fever. They are usually ascribed to an epidemic of dengue or to a prevailing malarial infection. The report that some of these cases have shown albumin in the urine becomes extremely suspicious. Fatal cases are reported, but some intercurrent disease or previously existing condition is supposed to be the cause of the fatal termination. On investigation it is found that most of these cases are of young people. Very often one or two physicians are found in a locality who postively declare that they have seen extremely suspicious cases or postively diagnosed such cases yellow fever. These physicians are generally younger members of the profession who have never seen the disease. It is a matter of experience that usually the older physicians acquainted with the disease in former epidemics fail to recognize these early cases and are the last to become convinced of the existence of the disease.

Convalescents from yellow fever may be discovered also on the streets. An icteroid hue of the eye persists usually for some time after recovery, and I believe not rarley shows itself also as a premonitory symptom of attack.

Another aid toward forming an opinion is found in the study of the mortuary records. A comparison should be made between the present time and the preceding year. Sometimes this investigation is in itself enough to give strong presumptive evidence one way or the other. The characteristic feature of the mortuary records is the increase in the number of deaths among the white population. The class of the white population especially affected varies according to the manner of introduction of the disease. It may affect especially the sailors, or children, or railroad people. Even when there is no marked increase of the death rate of white people we may find causes of death that are suspicious. For instance, young adults dying of congestion of the stomach, congestion of the brain, purpura hemorrhagica, memingitis, Bright's disease, bilious remittent fevers.

DIAGNOSIS OF INDIVIDUAL CASES.

The diagnosis of individual cases of yellow fever is, in my opinion, very easy. There is no acute febrile disease in which there are as many signs that may be called pathognomonic. The diagnosis of the disease rests upon three such symptoms, namely, the facies, the albuminuria, and the want of correlation between the pulse and temperature. I rely mainly for my diagnosis upon the facies, which I consider extremely characteristic. However, as I consider it my duty to convince the local practitioner of the existence of the disease, I make it a rule not to announce officially the existence of yellow fever until I have been able to show the presence of albumin in the urine. My own mind, however, is generally made up by the simple inspection of the patient, and I almost invariably find my opinion confirmed on the second, third, or fourth day by the appearance of the albuminuria.

FACIAL APPEARANCES.

The appearance of the face is that of typhus fever during the first forty-eight hours of this disease or like that of measles before the eruption breaks out, with a more or less pronounced icteriod hue. It is the latter feature, I believe, which gives the face its characteristic appearance. In the first twenty-four hours, or forty-eight, it is by no means a distinct jaundice. The physician to whom I am showing the signs of the disease usually expresses surprise when I state that jaundice is present. It is, of course, best noted in the sclerotics. It is hidden, however, by the marked injection of the smaller vessels. The icteriod hue is often better seen at some distance from the patient than when the eye is closely inspected. It seems to show itself in waves with the different movements of the eye. Possibly this is the effect of transient contraction of the vessels of the conjunctiva or of the different angles of reflection of the light upon the eyeball. In severe cases and on the second and third day of the disease the jaundice becomes more prominent. It will show itself in distinct waves as the capillaries of the skin contract with the movements of the facial muscles or it may be brought out by taking up a fold of the skin between the fingers, when the contrast between the yellowish, anæmic skin and the surrounding congested areas will become well marked. Later on there may be well marked jaundice. By this time usually the florid color of the face has been replaced by a more dusky hue. In the latter stages of the disease there are also characteristicis features of the facies in grave cases. The mind is usually clear and there is a peculiar alertness and watchfulness that is not seen in other acute febrile diseases. The physicians who have not seen yellow fever for many years seem to have this peculiar phase of the later stages of yellow fever impressed upon their minds. This, however, is too late a diagnostic sign for my purposes, and besides, it does not appear in mild cases of disease.

ALBUMIN.

The albumin appears in the urine usually on the third or fourth day of the disease. It may be very transient albuminuria In many mild cases the albumin is present only in the urine passed in the evening of the third or fourth day. In many cases it is only a trace, but even then by a careful centrifugation granular casts may be found in the urine. In severe cases the quantity of albumin may be very great and the different forms of casts characteristic of acute parenchymatous nephritis are found in abundance in the urine. Now there are many acute febrile diseases in which albumin may be found in the urine, but in none of them so constantly nor so early when in connection with such mild manifestation of the toxæmia. In all such diseases the albuminuria will be found at the end of the first week or during the second week, and as an evidence of persistent high temperature and intense toxæmia. Cases of yellow fever corresponding in intensity with these present at the same time such characteristic features that it is impossible to mistake them. The difficulty of diagnosis can only be met with in connection with mild cases.

PULSE AND TEMPERATURE.

The third characteristic symptom of this disease is the want of correlation between the pulse and the temperature. This may be a rather late manifestation and may be absent, especially in children. It should be remembered that the characteristic feature of yellow fever in this connection is not a slow pulse during the convalescence or even during the defervescenece of the fever. The characteristic feature is that quite often we find that at the same time that the temperature may be rising the pulse will be falling. On the third or fourth day of the disease, for instance, with an evening exacerbation of half a degree or one degree of temperature, we may find that the pulse is perhaps 10 beats slower than in the morning. I have seen, however, the same discrepancy in cases of true dengue, and in the tropics also, in connection with other febrile diseases. Still this is exceptional. In dengue the excessive fall of the pulse presents itself with a distinct defervescence of the temperature, and I suspect that many cases that are reported from Cuba of slow pulse in typhoid and malarial fevers may have been cases of yellow fever.

USE OF THE MICROSCOPE.

An erroneous belief has prevailed throughout the South, especially among physicians who were not practical microscopists, that the microscope should be an important aid in the diagnosis of yellow fever. It appears that poorly prepared abstracts from the work of Sanarelli have led many to believe that a characteristic feature—the bacillus of Sanarelli itself—was found on examination of the blood. Now, the truth is, that even with the assistance of post-mortem examinations, Sanarelli was able to discover his bacillus in 56 per cent only of the cases of yellow fever. He would be a poor clinician, indeed, who could only diagnose about one-half of the cases. The truth is, however, that during life the microscope could not establish a positive diagnosis. As far as our present methods go, it would be impossible to distinguish between a drop of yellow fever blood and blood from a healthy man.

Negative evidence may be presented by the microscope. The presence of the plasmodium malariæ, for instance, would prove that a case was suffering with malarial poisoning, and, presumably, not with yellow fever. But the differential diagnosis between these two disease is usually easy. The bilious remittent fever that in our old text-books of medicine occupied a conspicuous place in tables of differential diagnosis with yellow fever, has practically disappeared from the Southern sea border, since yellow fever ceased to be an endemic there. It was, in fact, the yellow fever of the natives, and of places in the interior. The former we supposed to possess a certain degree of immunity against yellow fever, and the disease was believed to be restricted almost to the littoral.

The plasmodium has been found in the blood in cases of yellow fever. The mistake made by the board of experts at New Orleans, when they failed to recognize the existence of yellow fever at Ocean Springs, was due to the finding of the plasmodium in at least two of the cases.

DENGUE AND YELLOW FEVER.

The prevalence of a widespread, mild, epidemic fever during the present outbreak of yellow fever has been undoubtedly a source of doubts and difficulties in connection with the diagnosis.

Many of these cases were found to exist in houses where cases of yellow fever were present at the time, and I must confess that it was impossible to discover in them any of the characteristic symptoms of yellow fever. Many of these cases had a distinct eruption and must be looked upon as cases of dengue. This fact may bring forward new problems as to the relations between these two diseases. From our present point of view, we can only state that yellow fever appears to spread more easily when there is an epidemic of dengue prevailing. All evidence goes to show that a previous attack of dengue does not protect against yellow fever, and we must look upon the former as an entirely distinct disease.

IMPORATNCE OF DIAGNOSIS OF FIRST CASE.

I cannot insist too much upon the importance of the diagnosis of the first case of yellow fever in a locality. Undoubtedly the cause of the epidemic of yellow fever is to be found in the introduction into a community of cases that are not suspected to be yellow fever. This probably occurs most frequently in connection with individuals of the colored race. The disease in them is usually very mild, and their movements from place to place are less likely to attract the attention of the health authorities. I have no hesitation in saying that if the first case of yellow fever introduced into a city were always recognized the spreading of the disease would be invariably prevented.

I will conclude this report by inviting your attention to the fact that the movements of the yellow fever expert have been frequently interferred with by the fears of the communities that he might convey the disease from place to place. In moving from one locality to another I took all the necessary precautions and felt absolutely sure that I could not be a source of infection. I was immune and travelled with very little baggage, which I frequently changed. Yellow fever has never been carried from one locality to another in this manner.

This fear of the communities was in part genuine and due to ignorance, but was in part a pretended fear of those who knew better. I have finally to state that I have received every attention and assistance from the local health authorities in all cities that I have visited.—*Pub. Health Reports.*

THE OPERATIVE TREATMENT OF LUMBAR (POTT'S) ABSCESS.*

By James K. Young, M.D., of Philadelphia, Professor of Orthopedic Surgery in the Philadelphia Polyclinic, Clinical Professor of Orthopedic Surgery in the Woman's Medical College, Instructor in Orthopedic Surgery in the University of Pennsylvania, Surgeon to the Hospital for Crippled Children.

In the *Transactions of the American Orthopedic Association* for 1891, I reported a case of external lumbar abscess, and suggested a division of lumbar abscesses into external and internal, according to their location, relative to the lumbar fascia. During the past fourteen years, a large number of these cases have come under my observation; a few of the abscesses, of small size, have been absorbed under conservative treatment, but a majority have required operative interference of some kind.

When the abscess is small and the contents not very thick, aspiration, with or without the use of antiseptic injections, is often followed by the disappearance of the lesion. This is particularly true of external lumbar abscesses. When the contents are thick, or consist of caseating material, incision and free drainage under aseptic precautions is the only plan of treatment likely to be followed by success. The incision must be made at the most favorable point for drainage, and, when possible, through-and-through drainage by means of a rubber drainage-tube or iodoform gauze, will be followed by the best results. When repeated aspirations fail, or when, for other surgical reasons, they do not appear to be indicated, incision and drainage will be necessary. Aspiration has seemed to me to be unsatisfactory and tentative on account of non-withdrawal of caseous clots, except in the cases above indicated. I have not employed injections of carbolic-acid solution because of the reported fatal results, nor early radical operations, especially erasion of the vertebra, for the same reason. Dr. Rupprecht of Dresden informed me nine years ago that after a fair trial he had abandoned the radical operation, because fifty per cent. of the patients subjected to it died.

The different forms of lumbar abscesses are shown in the following table:

Course.	Exit.
a. External Lumbar Abscesses.	
Burrow between the fasciæ of the quadratus lumborum and abdominal muscles, through the internal oblique.	Posteriorly beneath the external oblique and latissimus dorsi at the outer border of the erector spinæ muscle.
b. Internal Lumbar Abscesses.	
1. Enter psoas sheath.	As psoas abscess.
2. Gravitate beneath the internal iliac muscles over the posterior brim of the pelvis, perforating the great sacrosciatic foramen,	As gluteal abscess, or as iliac abscess.
3. May be directed to the iliac region along the aorta and external iliac arteries.	As gluteal abscess.

During 1894, I showed two cases ot iliolumbar abscess, and referred to a third, before the Philadelphia County Medical Society, all the patients having recovered after through-and-through drainage, The operation advocated in these cases is performed under strict aseptic precautions. The abscsss is opened by careful dissection, the incision being made in the direction of Poupart's ligament, half an inch to the inner side of the anterior superior spinous process. The external oblique muscle is divided in the direction of its fibers, and the internal oblique at right angles, or the fibres are separated. The contents of the sac are evacuated, and a long, heavy grooved director or eye probe is carefully passed up to a point above the sacro-iliac junction, and a straight longitudinal incision made upon it. The counter incision in two of the cases reported was half an inch to the outer side above the posterior superior spinous process of the ilium. In one case, in which I was associated with Drs. Willard and Ashurst‘ it was considered advisable to remove a portion of the crest of the ilium with a rongeur forceps, so as to permit the drainage-tube to lie flat in the iliac fossa. This appears to facilitate the drainage and healing of the abscesses rather than to retard them.

The abscess cavity is thoroughly irrigated with boiled water and boric-acid solution. A rubber drainage-tube is passed through it and secured by safety-pins. This is allowed to remain in place for two or three days, after which it is gradually shortened. Half an ounce of a 10 per cent. emulsion of iodoform is introduced into the cavity, iodoform gauze packed about the wound, and a bichlorid dressing applied.

The indications for this operation are: (1) When the abscess is large and makes pressure upon important organs. (2) When the abscess is increasing rapidly in size. (3) When there is danger of rupture of the abscess into the peritoneal cavity. In the case of a psoas or gluteal abscess it is rarely possible to make a counter opening, and to accomplish through-and-through drainage, a rubber drainage-tube should be inserted into the cavity as far as possible, and the cavity irrigated daily or every other day with boiled water and boric-acid solution, followed by the use of the iodoform emulsion.

In all cases requiring operation it is absolutely necessary to fix the spine as thoroughly as possible by apparatus of some kind. In one of these cases of iliolumbar abscess in an adult female, who was under the care of another surgeon, the abscess sinus would not close until the spine was thus secured.—*Med. News.*

Society Reports.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

Regular Meeting held October 26, 1899.
First Vice-President, Dr. Paulus A. Irving, in the chair.

Dr. Jacob Michaux reported "A Case of Typhoid Fever, Relapsing, with Unusual Absence of Cerebrel Manifestations, Resulting in Death." It began with the usual symptoms, running on three or four weeks with nothing abnormal. About the beginning of the fifth week, there was a fall of temperature and convalescence began. A week after, there were decided evidences of intestinal disturbance from an unknown cause, but he suspected imprudence in diet. The patient rapidly grew worse, but (and this was an especial point of interest) there was a singular absence of cerebral symptoms. During the first part of the sickness, she complained of the fear of losing her mind, but there was no delirium, although there might have been a little incoherence in going to, or awaking from, sleep, which was much less than he had ever seen in a severe case of typhoid. In the relapse, there was a tendency to cerebral complication, the patient being occasionally unable to find the correct word, but she was conscious of it and embarrassed thereby, differing thus from the usual mental symptoms of typhoid. Dr. Michaux explained this absence: he had adopted the habit of allowing the bowels to run instead of checking them, believing that the detritus was gotten rid of and auto-intoxication avoided. In this case there were five or six stools in twenty-four hours, which he allowed to go on until there was complaint of weakness, when he used opium and lead, which acted well. This was during the first attack. During the relapse the bowel symptoms were marked and serious. The operations were allowed to continue and the following prescription, which seemed to produce no increase of the diarrhea, given every four hours: Calomel one-twelfth grain; bicarbonate of sodium, one grain; and ipecac, one-twelfth grain. This was for asepsis and to stimulate the liver and eliminate the poison. He believed the unrestrained condition of the bowels accounted for the absence of cerebral symptoms and, for the same reason, there was little subsultus, although a slight amount of trembling was present when the patient was very sick. It might be argued, and with some reason, that while the course pursued relieved the system of detritus, it induced inflammation. Yet, when Epsom salts was given in acute dysentery the congested parts and the tendency to inflammation were relieved. He was not prepared to condemn in toto the Woodbridge treatment, but would not employ it indiscriminately.

Dr. Virginius W. Harrison reported a case of "Typhoid Ulceration and Perforation, with Operation." Youth, aged 18 years, no previous sickness. He had progressed well up to the twenty-four hours before Dr. Harrison saw him in consultation.

On Friday, 22nd, he was attacked by a severe, persistent abdominal pain. Without advice, the father administered a large dose of whiskey. Early the next morning, 23d, the attending physician was sent for. Turpentine stupes were applied without relief. That night, two doses of Epsom salt were given, another early the next morning, 24th. No operation resulting, castor oil was administered and late in the morning there was one. That afternoon, Dr. Harrison was called in consultation and diagnosed perforating ulcer with septic peritonitis; prognosis, inevitable death without operation, which he advised. Consent being given, the patient was moved to Virginia Hospital, which he reached at 8.30 p. m. Incision was made in the median line and the perforation, which was easily found, was ascertained to be about the size of a goose quill and in the outer side of the ileum. Fecal matter was oozing from it. The abdominal cavity was full of pus and other fluid; the bowels filled with gas; and suppurative peritonitis was general. The edges of the perforation were trimmed and it was closed by three sets of sutures. The obdomen was irrigated with normal saline solution, several yards of gauze being inserted for drainage. The patient was put to bed in a condition better than that he possessed while on the table. Before the operation, one pint of normal saline solution was transfused venously, which improved the state. During the operation, strychnine was given hypodermically. The patient soon rallied, became conscious and conversed. In fifteen minutes the pulse began to fail rapidly and venous transfusion was resorted to. Improvement resulted, but the patient soon became so restless as to require holding in bed. He was called to the telephone, but before he could reach it, he was summoned back to find the patient dying.

Fifty-two operations for perforating typhoid ulcer have been reported, with 27 per cent. recovery, and the operation therefore is certainly worth the trial. The low condition of the patient is certainly no more a contra indication for operation than in suppurative peritonitis or pyosalpinx.

Dr. Mark W. Peyser reported an "Exaggerated Case of Urticaria with Syncope." Woman, white; married; aged 40 years; history of gastric and intestinal indigestion, and tachycardia which later he believed functional. At dinner, the patient had partaken of cabbage; had eaten little or no supper. Soon after dinner, she felt an itching on her left hip and thinking she had been bitten by an insect, she investigated, but could see nothing except an elevated patch. Following, was a like sensation on the right hip, with like result, it spreading rapidly until the face, trunk and all the limbs were affected, and urticarious patches as large as the palm of the hand appeared. Receiving an urgent call that the woman was dying, the doctor hurried to her bedside to find her recovering from a profound syncope. The patches were intensely congested and stood in relief from the surface about an eighth of an inch, with edges puckered like scar tissue. Nitroglycerine and strychnine were injected hypodermically, alkaline washes and enemata employed, and bromide of sodium given internally. Itching soon disappeared and the patient was up and about in three days. The only cause for the syncope that could be given, was intense dilatation of the cutaneous vessels, depleting the heart and the internal circulation.

Dr. Paulus A. Irving reported a case of "Mechanical Intestinal Obstruction." The patient was found tossing in bed from excessive pain. The day before, he had been perfectly well, had had a copious evacuation and ate a hearty supper. An hour after, there were violent abdominal pains, which persisted the entire night in spite of various household remedies. The pain was localized around the umbilicus, and there was considerable gastric disturbance. Enemata brought away only a slight action; but the stomach became easier. Calomel was administered and followed by a saline, which came back. The patient was seen several times during the day, and at night was removed to Virginia Hospital. High enemata were given, but they came back only slighted stained. The patient gradually grew worse and was finally operated upon. Five or six inches above the ileo-cecal valve was found a band so tightly hugging gut that when it was severed and made a popping noise. The patient reacted well; but because of peritonitis and paresis, no evacuation was had until the next evening, and this was produced only after several high enemata. Recovery was uneventful. For a long time the patient had suffered from constipation and was much emaciated. It was hard to say what produced the inflammation. About ten years ago he had a similar attack, which must have been appendicitis, and the later trouble might have been due to it. The appendix was not carefully sought.

MARK W. PEYSER, M. D., Secretary.

NEW YORK ACADEMY OF MEDICINE.

Section in Orthopædia. Meeting of Oct. 15, 1897.

Congenital Absence of the Radius.—Abstract of a paper read by *Dr. H. L. Taylor.* The abscence or imperfect development of the radius in the new-born causes the appearance of club-hand from dislocation of the carpus to the radial side.

Case I.—Girl, 5 weeks old. Absence of the radii. Hand at right angles with fore-arm. Genuradius and the ulna shortened thickened and bent, also the improved position of the hand at 15 months.

Case II.—Girl, 2 weeks old. Absence of the right radius and both thumbs with their metacarpal bones. The deformity of the right hand was extreme. The patient lived but a few months.

Case III.—Boy, 5 weeks old. Slight double radial club-hand with the radii abnormally small. The hands were kept in good position by leather splints.

Case IV.—Girl, 2½ years old. Absent ulna and the 4th and 5th digits with their metacarpal bones. Radius thickened and bent toward the ulnar side. The hand usually turns towards the ulnar side but is sometimes held straight. The elbow has abnormal lateral mobility and hyper-extension, as might be expected from absence of the ulna. Chlidren with deficiencies of this kind are usually premature or still born. If alive, they seldom live many weeks. There are about 200 recorded cases of absent fibula and 100 of absent radius; but the deficiency shown in case *VI*,absence of the ulna,is believed to be very rare. The dimples, furrows and scar-like marks, vestiges perhaps of separated adhesions, support the theory that these defects are caused by the pressure of a contracted amnion. As rotation of the fœtal limbs is said to begin about the 5th week, if the amnion exerts pressure from the 5th to the 8th week, the radius and fibula may be blighted. If, on the other hand, the contraction takes place before the 5th week and before the rotation of the limbs, the ulna and tibia will suffer. Operations, if performed, should be preceded by mechanical treatment. Contracted structures may be divided. Osteotomy may be followed by over-correction and the ulna may in various ways be attached to the carpus in an improved position.

Dr. R. H. Sayre said that he had treated a patient affected with double congenital absence of the radius by manipulation, stretching and retention in plaster of Paris. The hands had been brought into a fairly normal position but the child died of cholera infantum when ten months old. In another case the ulna was so small that it hardly seemed feasible to split it for the reception of the carpus, as has been done in a reported case. He therefore fixed the ulna in a gap made in the carpus.

Dr. A. H. Phelphs said he could hardly use the term club-hand in speaking of congenital abscence of the radius.

Dr. A. B. Judson said that there seemed to be no affection of the hand corresponding to congenital club-foot. So-called club-hand was caused by deficiencies of the skeleton, by injuries and diseases of the bones, by cicatricial contraction or by paralytic affections. There were also cases of club-foot originating in all of these ways, but what we know as congenital club-foot is caused by factors which are apparently not operative in the upper extremity.

A Case of Traumatic Club-hand.—*Dr. Taylor* exhibited a girl, 8 years old, a portion of whose radius had been resected for necrosis. The radius was, in consequence, much shorter than the ulna and the result was that the hand was thrown toward the radial side and had the appearance of a club-hand.

Dr. Phelps said that in a case of club-hand thus acquired, he would shorten the bone instead of cutting the tendons. Tendons when divided in their sheaths are apt to become adherent, while resection of the longer bone would in suitable cases bring the hand to a normal position.

Traumatic Club-foot.—*Dr. Judson:* was reminded of a patient whose tibia had been shortened for disease of the bone. As the boy grew the fibula projected to such a degree that the patient could not walk. In such cases another operation was necessary to shorten the unaffected bone.

Dr. R. Whitman was reminded of a man whose tibia had been shortened by an operation when he was 13 years old. The result was that when recently seen the leg was 5 inches short and the foot had been forced into extreme varus by the relative over-growth of the fibula. Bone reproduced to fill an interval left after resection, did not grow. Final results after such operations, performed in childhood were usually satisfactory.

Dr. R. H. Sayre cited a case which showed that reproduced bone did not cease to grow. The patient had been exhibited to this Section by Dr. L. A. Sayre. Four inches of the neck and head of the femur had been removed and when the boy was 12 years old there was only about ¼ inch of shortening. In some of Dr. J. R. Wood's resections of the jaw, the lower maxilla had been reproduced and had grown with the rest of the body.

Dr. Whitman said he referred to parallel bones of the extremities. Deformity was almost inevitable when a portion of one bone only is removed.

Dr. Phelps said that new bone had feeble circulation, grew less rapidly than normal bone and became very hard, as was shown when one of two parallel long bones reproduced.

Dr. R. H. Sayre said that the vicinity of a nutrient artery would probably influence the growth of new bone.

A Case of Helpless Club-foot from Deficiency of the Skeleton.—Dr R. H. Sayre described a case in which double club-foot was associated with congenital deficiency of both of the bones of the leg, in a girl 12 years old. There was a bent and rudimentary fibula and a tibia only an inch or so long which stuck out like a little sprout under the skin. The foot was very much twisted and hung with a helpless flail-joint against the leg. Amputation at the knee was done.

Club-foot Caused by Absence of the Fibula.—Dr Whitman exhibited a child, 8 months old in whom congenital absence of the fibula had caused talipes equino-valgus and anterior bowing of the tibia. The equinus had been extreme but division of the tendo Achillis and the application of a brace had brought the foot to a right angle.

Dr. Taylor had seen 8 or 10 patients affected with congenital absence of the fibula. He said that in such cases it was very difficult to remove the lateral deformity by an operation. As there was no malleous to support the foot it would return to its former position. Another interesting point was that the shortening found in infancy, in congenital absence of the fibula, would greatly increase with the growth of the child. In an adult, whose measurements he had taken for some years, there is a shortening of 5 or 7 inches. In a boy of 12 years shortening was the same,and increasing. This progressive shortening took place in the fore-arm as it did in the leg.

The Abuse of Topical Applications to the Enuométrium.—Samuel L. Webber, Chicago, believes that severe tubal infection frequently follows applications to the endometrium ,and that a very large percentage of these cases are the result of the pre-existing gonorrhœal endometritis following the commonly used medicaments, and the harm that is done is that valuable time is wasted, and that the woman continues to suffer. The use of the curette is a rapid method of terminating the trouble. Curetting removes most of the thickness of the endometrium, leaving only a thin layer behind. Following this, antiseptic applications may be made with the expectation of penetrating the thin layer of the endometrium left, and thus reaching and destroying all the bacteria. Frequent curettement in rapid succession is occasionally necessary. Strong aniiseptic applications of such substances as remain on or in the affected tissue for some time are desirable—hence the valure of iodine and iodoform. He consideas the antiseptic applied and not the curettemeut the essential factor in the treatment.—*The Canadian Practitioner.*

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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All communications, either of a literary or business nature, should be addressed to, and any remittances by P. O. Order, Draft or Registered Letter, made payable to ROBERT D. JEWETT, M.D., P. O. Drawer 825, Wilmington, N. C.

Editorial.

CIGARETTE SMOKING.

Is there not some exaggeration as to the great danger in cigarette smoking, as so often asserted by those who have never investigated the matter, but who base their assertions on what they have heard some one else say? We have often seen statements in the public prints of the great mortality from smoking cigarettes, but we have not seen these statements backed by proof that we considered reliable. That excessive cigarette smoking, especially by the young, is injurious cannot be denied, but the same is true in regard to tobacco smoking in any shape. The danger in smoking cigarettes is due, without doubt, to the fact that these who indulge in the practice nearly always smoke to excess, and also inhale the smoke, thus bringing the poison into contact with a much larger extent of mucous membrane and permitting a more rapid absorption. A recent investigation into the composition of cigarettes showed that they were made of pure tobacco. We do not advocate cigarette smoking, or smoking at all, among the very young, and as it is a tendency with youth to run into excess in all things that afford pleasure, it were well that some restriction be thrown around the sale of cigarettes and all other forms of tobacco to boys. Those extremists who censure the man who indulges in a dose of nicotin now and then, will imbibe their regular doses of caffein or thein, acknowledging that they cannot do without it, and thank God that He has given them such good things as coffee and tea.

We advocate strongly temperance in all things—moderation in the use of tobacco and alcohol as well as of tea and coffee—but the cause of temperance is hindered by those who make extravagant statements that cannot be proven.

THE YELLOW FEVER OUTBREAK.

The outbreak of yellow fever in the Gulf States has been finally brought to a close by the advent of cold weather with frost. The Public Health Reports up to November 10th show the following number of cases and deaths to have occurred: Alabama, 709 cases, 68 deaths; Georgia, (refugees in Atlanta) 3 cases, no deaths; Illinois, 4 cases, no deaths; Kentucky, 1 case, 1 death; Louisiana, 1780 cases, 247 deaths, Mississippi, 1633 cases, 93 deaths; Tennessee, 52 cases, 14 deaths; Texas, 16 cases, no deaths. Total 4198 cases, 423 deaths. While subsequent reports will add a few cases and a few deaths to the above statement, the total will not be materially changed. The total death rate of the whole epidemic was slightly above 10 per cent.; but it will be noticed that the mortality of the various States differed very greatly, that of Mississippi being only a little above 5½ per cent., while that of Louisiana was nearly 14 per cent., and of Alabama a little less than 10 per cent.

This outbreak of yellow fever in this country is almost surely due to the political situation in the island of Cuba, which prevents the carrying out of such sanitary regulations as will control the spread of the disease. According to the statement of Dr. Guiteras, yellow fever was never so prevalent in that island as at present, and the nearness of the island to the United States, permitting the passage in small boats which are able to effect a landing in any of the small harbors on the Gulf coast without the aid of pilots, and the existing reasons for making these excursions without the knowledge of the government authorities, render it almost impossible to keep the disease from our shores. It were well that Congress consider this factor in discussing the reasons for bringing to a close the hostilities in Cuba. This epidemic has cost the South more than the miserable island is worth, and with the present conditions continuing we may look for another and a more disastrous visitation next summer.

MUSHROOMS AS FOOD.

The following item is taken from the Washington Notes in a recent issue of the *Maryland Medical Journal:* "Dr. Daniel Kelly is slowly recovering at the Providence Hospital from the toad-stool feast with Count De Vecchi. The Count died Wednesday evening, two hours after having eaten the poisonous fungi, mistaking them for mushrooms." Why is it that some people cannot be contented with the innumerable good things that God intended man to eat, and to which no danger is attached, but must run the risk of killing themselves to gratify an entirely cultivated taste?

HEALTH CONFERENCE.

The State Board of Health has recently held another health conference at Goldsboro. The conference held its own in the interest of the people with a circus and other attractions. Several interesting papers on topics relating to public health were read and discussed. The Board is doing much good by these conferences at various towns in the State, interesting and instructing the people in sanitary matters as they never have been before.

Reviews and Book Notices.

A System of Medicine by Many Writers. Edited by Thomas Clifford Allbutt, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.L.S., F.S.A.; Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College. Vol. III, Cloth, royal octavo, 1176 pages. Price $5.00. The Macmillan Company. New York. 1897.

We regret that we have not had the pleasure of reviewing the first and second volumes of this work. The present volume is devoted to the consideration of Infective Diseases and Toxicology. Infective diseases are grouped into those of "Chronic Course"—tuberculosis, leprosy, actinomycosis and mandura foot; into those of Uncertain Bacteriology, this group being subdivided into those "not endemnic" and those which are "topical or endemnic"; those "Communicable from Animals to Man"; those "Due to Protozoa." The volume furnishes the most complete and generally satisfactory treatise on the subject of infectious diseases that has come to our notice. The various diseases are discussed by men recognized as thoroughly fitted for the task allotted them. It is noteworthy, however, of the rapid advances in the diagnosis and treatment of this class of diseases, that it became necessary for the authors of the essays on plague, typhoid fever and yellow fever to write addenda to their papers. The article on yellow fever by Dr. Andrew Davidson is well written. In the matter of diagnosis, however, there is nothing said about the difficulty of differentiating the mild cases that occur in the beginning of an epidemic from dengue. The coexistence of the two diseases in the recent epidemic in the Gulf States and the difficulty of determining the nature of the disease was in a great measure responsible for the wide extent of the epidemic. It is even possible that what was decided to be dengue by a board of experts may have really been cases of yellow fever. It is certain that numerous errors in diagnosis were made.

Among the diseases communicable from animals to man are three essays on vaccinia by Drs. T. D. Acland, S. M. Copeman and Ernest Hart. These make a very complete study of vaccination, the accidents and sequels connected with it and the influence it has had and can have on the death-rate from small-pox.

Under the head of intoxications are considered ptomaine poisoning, and poisoning by grain, mushrooms, snake bites, alcohol, opium and various metallic poisons. The volume is supplied with an index of authorities and with a useful general index.

While the title states that this is Volume III., it is referred to in the preface as the Second Volume and the finis reads "End of Vol. II."

Lectures on Malarial Fevers.—By William Sydney Thayer, M. D., Associate Professor of Medicine in the Johns Hopkins University. Cloth, octavo, 326 pages. D. Appleton & Company, New York. 1897.

From the first lecture of introductory remarks to the ninth and last, discussing diagnosis, prognosis, treatment and prophylaxis, this work is exceedingly interesting and instructive, and should be in the hands of every physician certainly whose practice brings him into frequent contact with this common disease. Dr. Thayer's extended investigations in regard to malaria have made him an authority on the subject. Much of the matter contained in this volume has been published at different times and in a disconnected way in various publications, but it is a pleasure to have it put together in a compact and orderly form. Lectures two and three are devoted mainly to a description of the best methods of examining the blood and of the hœmacytozoa of malaria. These lectures together with the excellent plates accompanying the work will prove exceedingly useful to those wishing to prepare themselves for the study of the blood in malarial fever. We consider the work one of the most useful contributions to recent medical literature.

Abstracts.

A Rare Case of Lithopedion.—Dr. J. G. Clark, *Bulletin Johns Hopkins Hospital*, reports a case of what he claims to be the largest lithopedion yet removed by abdominal operation followed by recovery of the patient. In this case the patient was a colored woman, aged 45 years, who was admitted to the hospital for pains in the lower abdomen, enlargement of the abdomen, and dyspnœa. Four years before menstruation ceased and she had all the symptoms of early pregnancy. During the letter months of pregnancy fœtal movements were felt. About the time for her confinement she had an attack of severe pain in the left side and felt something break, much watery fluid passing by the vagina. At the end of a week a physician was called who diagnosed extra-uterine pregnancy and advised an operation which was declined. The operation revealed adhesions between the anterior abdominal wall and back of fœtus; dense adhesions binding the gestation sac to the intestines; and the placenta necrotic. The fœtus occupied an oblique position in the abdomen its chest lying in close contact with the aorta. The secondary or adventitious sac was situated between the folds of the broad ligament, and secondary rupture had occurred in the superior part of the wall. A large cystic ovary and hydrosalpinx were removed, and the patient made an uncomplicated recovery. The length of fœtus was 42 cm., and the weight 4¾ lbs. It was entirely covered with a thin translucent membrane easily peeled off.

The pathological report says further:

Median incision from the neck down to and through the symphysis pubis reveals the following condition: Superficially the body is covered with a membranous layer which can be peeled off easily, next comes the thick brawny bacon-like skin, and beneath it the brownish red muscle which contains multiple fatty areas about the size of millet seeds.

The peritoneum is of a dull slate color, like that seen in an old post-mortem subject.

The intestines are collapsed, soft, pliable, and except for the shrinking of the tissues from absorption of the watery elements, appear to have undergone little or no change.

The liver is of a light brownish red tint interspersed with slate colored patches.

On section the liver is found to be much denser than normal, the stroma is of a greenish brown color, with many minute yellowish spots.

The lungs are atelectatic and have a dense fleshy feeling. The color is brownish red, resembling the color of the liver.

On section, gritty particles are encountered with the knife. The heart is collapsed, wrinkled, and of a dark brown color. The spleen is small and dense.

THE TREATMENT OF MALARIA IN CHILDREN.—A. Feuchwanger (*Therapeut. Monatshefte*) during five years' practice in Palestine, observed a great many cases of malaria, and endeavored to discover a substitute for quinine; nevertheless, he was compelled again and again to return to quinine, as the latter gave, after all, the most reliable results.

To children he principally administered quinine bisulphate, which is better borne by the stomach than the simple sulphate, and is therefore of greater utility, although containing less quinine. In very young children (8 days to 2 months old) he frequently ordered an ointment of quinine:

℞—Quinine sulph 2.0;
Adeps suill 40.0

M. Ft. ungt. Sig—To be rubbed into the axillary and inguinal regions, three or four times a day.

In cases where the bisulphate of quinine was not well borne internally, suppositories were resorted to, containing double the dose, i, e., a child five months of age was ordered a suppository containg 0,1 quinine sulphate or muriate five times a day. In rare cases in which these suppositories caused tenesmus, he administered the quinine in rectal injections, rubbed up, in the same dose as in suppositories, with the yolk of an egg. In neuralgia of malarial origin, in older children, valerianate of quinine was used by preference. In two cases of pernicious malaria he had recourse to hypodermic injections of muriate of quinine. The children were in a comatose condition, with tardy pupillary reaction, severe vomiting, extensive enlargement of the spleen and liver, marked icterus, and severe hemoglobinuria. After three injections of muriate of quinine in a little diluted muriatic acid (the ages of the children were 10 to 12 years) the hemoglobinuria vanished as though by magic, the vomiting was controlled bv ice pellets and mustard plasters to the region of the stomach: lukewarm baths with cold affusion to the head, followed by an ice-bag, were ordered for the comatose state. To avoid a relapse he followed up the treatment for a number of days by smaller doses of quinine, and for a long time afterwards decoctions of calisaya bark were continued. In spite of this, relapses are not rare, and a malarial cachexia is developed, which sometimes leads to grave conditions. In these cases he sometimes obtained good results by a systematic arsenic treatment. —*Pediatrics.*

THE INDICATIONS AND CONTRAINDICATIONS FOR THE USE OF ATROPIN IN THE TREATMENT OF DISEASE OF THE EYE—W. B. Marple.—The use and abuse of atropin in eye troubles has been written of frequently, but there seems to be still necessity for impressing upon the general profession the indications and contraindications for its employment. Dr. Marple concludes as follows:

(1) It should be used in iritis; (2) It should be used in ulcer of the cornea and keratitis; (3) It may be used as a mydriatic in young persons under 30 or 35 years of age. Cocain and homatropin, however, answer as well and have many advantages. (4) It *may* be used in refractive work to relax the accommodation in the same class of patients as No. 3. Here also homatropin does as well.

The contraindications are: (1) It should *not* be used in conjunctival troubles; (2) It should not be used simply to temporarily dilate the pupil in patients over 40 or 45 years of age, unless iritis is preeent, in which case the age of the patient should not deter us from employing it. (3) It should *never* be used in glaucoma or when the tension of the eyes is increased.

Finally, only weak solutions (¼ of 1 per cent.) should be used in very young (1-3 years) children. Otherwise, constitutional effects of the drug are apt to follow.—*N. Y. Polyclinic.*

Therapeutic Hints.

TO RELIVE THE PAIN OF HERPES ZOSTER.—For this purpose salicylate of methyl should be well rubbed into the healthy skin surrounding the eruption, which latter should be protected from the air by a suitable dressing.—*Med. News.*

FOR LARYNGISMUS STRIDULOUS.

℞—Pot. citrat.	ʒ i℈ i
Pulv. ipecac. . . .	ʒ iii
Tr. opii . . .	gtt. xvi
Syr. simp. . . .	ʒ iii
Aq. dest. . . .	℥ iv.

M. Sig. Teaspoonful every hour.—*Med. News.*

The following formulæ are taken from the *Medical Record.*

NEURALGIA:—

℞—Menthol,	
Guaiacol	aa ʒ i.
Alcohol, absolute	ʒ xviij.

M. S. ℥ i. of this mixture to be rubbed lightly into the affected part two or three times a day.—SABBATINI.

℞—Aconitinæ	gr. iv.
Veratrinæ	gr. xv.
Glycerini	ʒ ij.
Cerati	ʒ vi.

M. S. To be rubbed over the painful parts.

Do not apply to any abraded surface.—DA COSTA.

℞—Quininæ sulph	ʒ i.
Morphin. sulph.,	
Acid. arsen	aa gr. iss.
Ext. aconiti	gr. xv.
Strych. sulph.	gr. i.

M. ft. pil. No. xxx. S. One thrice daily.—S. D. GROSS.

GOUT:—

℞—Vini sem. colchici	℥ ss.
Potass. iodidi	ʒ ij.
Liq. potass	℥ iss.
Tr. zingiberis	℥ ij.

M. S. ʒ i. twice daily in warm water.—HODGSON.

Or:

℞—Lithii benzoat	℈ ij.
Aq. cinnamomi	℥ iiss.

M. S. ʒ i. in a wineglass of water every four hours.—JACCOUD.

INDIGESTION IN INFANTS.—On the basis that *attacks of acute gastro-intestinal indigestion in infants* are caused by fermentation of undigested food, generally milk, those connected with the obstetric clinic have found that mercurous chlorid (calomel), in doses of $\frac{1}{20}$ to $\frac{1}{30}$ of a grain, given every hour until a grain is taken, has given most excellent results. Creosote has also been highly recommended, and seems to offer considerable possibilities for this purpose. All milk diet should be stopped for at least twelve hours, after which beef juice or peptone preparations may be given until the irritation has subsided.—*Philadelphia Polyclinic.*

CONSTIPATION IN BABIES.—For constipation occurring in babies during the first year, and not relieved by regulation of the diet, Carron de la Carriere recommends light massage of the abdomen with the palm of the hand well oiled. The movement should be made in a circle about the umbilicus, pressure being light, and exerted especially in the right iliac region. Each sitting should occupy not more than ten minutees, and shouldtake place in the morning. For babies aftr the first year, massage may be made with the finger tips over the course of the large intestine from right to left.—*Practitioner.*

THE PUBLIC SERVICE.

UNITED STATES MARINE HOSPITAL SERVICE.

For the week ending November 25, 1897.

Sawtelle, H. W., surgeon, to proceed to Memphis, Tenn., and assume temporary command of Service. Nov. 23, 1897.

Banks, C. E., surgeon, to inspect Service at Buffalo, N. Y., and Philadelphia, Pa. Nov. 22, 1896.

Glennan, A. H., passed assistant surgeon, to rejoin station at St. Louis, Mo., via Washington, D. C. Nov. 19, 1897.

Magruder, G. M., passed assistant surgeon, granted leave of absence for ten days on account of sickness. Nov. 20, 1897.

Cobb, J. O., passed assistant surgeon, to proceed to Delaware Breakwater Quarantine Station for temporary duty, and then to rejoin station. Nov. 19, 1897.

Wertenbaker, C. P., passed assistant surgeon, granted leave of absence for seven days on account of sickness, Nov. 23, 1897.

ARMY.

Leave of absence for one month is granted Captain R. G. Ebent, assistant surgeon.

Lieutenant Colonel J. V. D. Middleton, Deputy Surgeon General, granted one month's extension to present leave of absence.

Leave of absence for one month is granted Captain Isaac P. Ware, Assistant Surgeon, Fort Grant, Arizona.

By direction of the President, the retirement from active service this date, November 15, 1897 of Lieutenant Colonel William E. Waters, Deputy Surgeon General is announced.

Captain Richard W. Johnson, Assistant Surgeon is relieved from duty at Fort Logan, Colorado, and ordered to Fort D. A. Sussell, Wyoming, for duty.

Captain Charles E. Woodruff, Assistant Surgeon, will upon the abandonment of Fort Custer, Montana, proceed to Jackson Barracks, La. and report for duty at that point, to relieve Major William C. Shannon, Surgeon.

Captain Isaac P. Ware, Assistant Surgeon, is relieved from duty at Fort Grant, Arizona, to take effect upon the expiration of his present leave of absence and ordered to Benicia Barracks, Cal, for duty.

Captain Merritte W. Ireland, Assistant Surgeon, is relieved from duty at Benicia Barracks, Cal, to take effect upon the arrival at that post of Captain Ware, aud ordered to the Presidio of San Francisco, Cal. for duty.

PROMOTIONS.

Major Peter J. A. Cleary, Surgeon, to be Deputy Surgeon General with rank of Lieutenant Colonel November 15, 1897. vice Waters, retired

Captain Charles Qichard, Assistant Surgeon, to be Surgeon, with the rank of Major, November 15, 1897.

Lieutenant Paul F. Straub, Assistant Surgeon, to be Assistant Surgeon, with the rank of Captain, November 4, 1897 after five years service.

RETIREMENT.

Lieutenant Colonel William E. Waters, Deptuy Surgeon General, November 15, 1896.

Miscellaneous Items.

Dr. William D. Cooper, aged 77 years, died in Fanquier county, Virginia, October 30, 1897.

A druggist was recently fined $150.00 for practising medicine in New York without a license.

Dr. Gonin, of Lyons, recommends for bites of insects and serpents, that the wound be painted with formal, a second coat being applied after the first has dried. The soothing effect is said to be instantaneous.

A specialist of St. Louis, recently arrived from San Francisco, is sending to the medical press reprints of papers on his specialty, and takes the precaution to accompany the reprints with a biogrophical (auto?) sketch and portrait of himself. The doctor evidently intends to "get there."

Department of Public Health.—At a meeting held recently, the New York Board of Trade and Transportation adopted a resolution declaring the health of the people of far more importance than the proposed enlargement of the navy or other preparations for war, and calling for the appointment of a committee to consider the desirability of the establishment of a national department of public health.

Repressing Flirtation.—A telegram from Louisville to the daily papers says that it has been found necessary to place two policemen on guard before the Louisville School of Medicine every day at the time the girls' high school is dismissed, in order to prevent the medical students from flirting with the young women of the high school, which adjoins the medical college. The students deny that they have ever so much as glanced at the high-school girls, and say that the charge was brought merely to induce the city authorities to build a new schoolhouse in another locality.—*Med. Record.*

An Extraordinary Letter Counter.—M. Ginestous lately presented to the Anatomical and Physiological Society of Bordeaux, one of his college friends, age 27 years, who since the age of 10 has counted and is obliged to count the letters contained in the sentences which he thinks, speaks, writes or hears. He practices this habit from the moment he wakes to the time when he goes to sleep, snd without experiencing any difficulty. This automatic and continuous work does not in the slightest degree interfer with his other occupation, holding a conversation, reading a book, or following an argument. By what process has he arrived at this result?—*Maritime Medical News.*

By a system of very tall lying.

STARVATION AND DEATH IN THE KLONDIKE.—The tales brought by returning miners are of terrible suffering and privation endured by the gold seekers who have gone to Alaska this year, and they give every reason to fear that the misery of this coming winter will beggar description. The members of a party that returned two weeks ago to Victoria gave a moving account of their return over the mountain trail from Dawson City. During the trip they were reduced to boiling and eating pieces of raw hide and their boot tops. At one time they had nothing for three days, when an owl was killed, and on this they subsisted for three days longer. When they reached Dalton's cabin two of the party were mad from hunger. The leader of the party said that when he left Dawson City four hundred persons had purchased tickets for St. Michael, intending to go down on the steamers, which will, however, not get up until spring releases the river ice. To add to the misery of their position, every day sees new arrivals. Now that they are there they find curses their welcome, and they would give anything to escape. The supply of food is insufficient for those already there, and the only escape of many from starvation is through typhoid fever, which is reducing their number at the rate of five or six a day, and so leaving a smaller number of consumers of the lessening food supply.—*Med. Record.*

The Philadelphia Medical Journal. This will be the title of a new weekly journal to begin with the new year under the editorial management of that experienced and able editor, Dr. George M. Gould. That in itself ensures an excellent journal.

The vending of spectacles will not be permitted on the streets of Buffalo. Mayor Jewett has invariably declined to grant licenses for such purposes. Morever, in every license granted by the mayor the following prohibitive clause is added: "No eye glasses are to be sold under this license." It has been stated in the newspapers that a lawyer proposes to test the matter in the courts, by applying for a writ of mandamus to compel the mayor to issue a license permitting the sale of spectacles. The mayor holds that he has the power to refuse such a license, that he has habitually refused them because the sale of spectacles not scientifisally tested before purchase might work great injury upon the eyes of people who buy them, and that he will willingly defend a suit to compel him to issue licenses in such cases. The attitude of the mayor is undoubtedly correct and deserves the approbation of all intelligent people.—*Buffalo Med. and Surg. Journal.*

An editor has been inspired, after looking over his list of delinquent subscribers, to compose the following: "How dear to our heart is the old silver dollar, when some kind subscriber presents it to view; the liberty head without necktie or collar, and all the strange things which to us seem so new; the wide-spreading eagle, the arrows below it, the stars and the words with strange things they tell; the coin of our fathers, we're glad that we know it, for some time or other it will come in right well; the spread-eagle dollar, the star-spangled dollar, the old silver dollar we all love so well."—*Troy Times.*—*Col. Med. Jour.*

Send us one, doctor, to look at?

An antiseptic residince has recently been constructed at Yokohama, Japan, by Dr. W. van der Heyden, the bacteriologist, according to the *Journal d'Hygiene* of October 14. The walls are made of large blocks and slabs of glass, mounted in metal, and the whole hermetically closed. One of the windows open. A row of small openings near the ceiling of the upper story allow the egress of the air without permitting the entrance of the outer air, which is exclusively supplied through a pipe extending some distance beyond the house, into which it is forced, filtered and sterilized by passing over glycerin. The house is entered through a long hall and no germs can enter except those brought on the persons or clothes of the inmates. These microbes, however, find no further chance to develop, as is shown by the fact that butter and milk can be kept a long while without turning rancid or sour. The space left between the glass in the walls is filled with a special saline solution which absorbs the heat of the sun and moderates the temperature within even on the hottest days, while the slow radiation of the absorbed heat and chemic processes in the solution keep the house warm at night.—*Jour. Amer. Med. Asso.*

A BUREAU OR CLINICAL MEDICINE AND SURGERY.—There has been established at the Hall of the College of Physicians of Philadelphia, northeast corner of 13th and Locust Streets, a Bureau of Clinical Medicine and Surgery, having a central office with telephone connection, in charge of a clerk, whose duty it shall be to receive and post notices of the daily work in the various branches of surgery and medicine taking place at the different hospitals in the city. This is accomplished by notice to the bureau by postal card or telephone. By this means the numerous physicians who visit the city may be able to take advantage of the great clinical facilities offered by the hospitals of Philadelphia. A physician calling at the central bureau can thus ascertain what medical or sugical work may be going on during that day in any one of the different hospitals. The officers of the bureau are Roland G. Curtin, M.D., President; Henry R. Whaton, M.D., Secretary; Guy Hinsdale, M.D., Treasurer.

CARBOLIC ACID AS A POISON.—On September 14th three women swallowed carbolic acid for the purpose of terminating their lives, and between August 13th and September 14th no less than fourteen persons, including the three mentioned, attempted suicide in this way in New York. In most of them the attempt was successful, and all but three of the unfortunates were females. The selection of this drug for the purpose, notwithstanding the agonizing suffering to which it gives rise, is supposed to be on account of the readiness whith which it can be procured. No prescription is necessary to get it, and pharmacist is simply required to label the bottle "poison" and preserve the name and address of the purchaser for future reference, should occasion arise.—*Boston Med. and Surg. Jour.*

Reading Notices.

D. T. Hudgens., M. D., Elizabeth, Ark., says: I have used S. H. Kennedy's Extract of Pinus Canadensis in leucorrhea with very good results. I have had under my treatment Mrs. S., age 33 years, for leucorrhea, with anteversion of the uterus. I used the White Extract per vagina as a local treatment for the leucorrhea, and the treatment was attended with success. I am satisfied that Pinus Canadensis should occupy a prominent position in our materia medica.

The Local Treatment of Erysipelas.—Since the recognition of erysipelas as a germ disease, the local treatment has consisted chiefly in the use of various antiseptics, either in the form of lotions, ointments, or dusting powders. In the selection of such an actiseptic agent care should be taken that one is chosen which is free from irritant action and will not lower the vilality of the tissues so as to favor the spread of the erysipelatous process. Some time ago Dr. G. C. M. Meier(Times and Register) called attention to the value of a solution of aristol in collodion as an application in erysiylas. He states that besides the pressure exerted by the collodion, which is in itself useful, the aristol acts as an efficient germicide. Lately Dr. L. B. Parsell (Times and Register) has expressed himself very favorably in regard to the use of aristol in this disease. He says: "Dissolved in collodion in the proportion of 20 grains to the ounce, it is a favorite local application with me in cases of facial erysipelas. It should be applied freely with a large camel's hair pencil over and a little beyond the inflamed area and should be renewed as it scales off. Employed in this manner it relieves the intense burning pains, lessens the hardness of the tissues and seems to limit the spread of the disease.

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prescribed dose produces a feeling of buoyancy, and removes depression and mel-aoly; hence the preparation is of great value in the treatment of mental and nervous tions. From the fact, also, that it exerts a double tonic influence, and induces a lthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE—CAUTION.

he success of Fellows' Syrup of Hypophosphites has tempted certain sons to offer imitations of it for sale. Mr. Fellows, who has examined ples of several of these, finds that no two of them are identical, that all of them differ from the original in composition, in freedom n acid reaction, in susceptibility to the effects of oxygen when ex-ed to light or heat, in the property of retaining the strych-e in solution, and in the medicinal effects.

s these cheap and inefficient substitutes are frequently dispensed in-d of the genuine preparation, physicians are earnestly requested, en prescribing the Syrup, to write "Syr. Hypophos. Fellows."

s a further precaution, it is advisable that the Syrup should be ered in the original bottles; the distinguishing marks which the bot-s (and the wrappers surrounding them) bear, can then be examined, the genuineness—or otherwise—of the contents thereby proved.

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NORTH CAROLINA
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A SEMI-MONTHLY JOURNAL OF MEDICINE AND SURGERY.

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Original Communications.

LACERATIONS OF THE PERINEAL BODY.*

BY LOUIS FRANK, M.D., Visiting Gynecologist to the Louisville City Hospital, Louisville, Kentucky.

VERY few women who bear children escape without lacerations of the perineum, consequently we find that more married women come to the gynecologist suffering from lacerations of the perineum than from any other pathological condition.

The subject has been very much overlooked of late, not only by writers, but also by operators, probably because they have sought the name and reputation which are more easily to be derived from major surgery. I know of no one subject of more interest which the general practitioner and specialist might discuss, as here they are upon neutral ground, as it were, one upon which they can touch hands. I have heard of men who have gone through an active obstetrical practice extending over a number of years without ever having seen a lacerated perineum among their own clientele. I grant you that a woman may occasionally give birth to a child without a rupture, but when men make such statements as this to intelligent doctors, we must come to the conclusion that either they have delivered no women, have never examined the perineum after labor to see whether or not a laceration has occurred, or they have not been honest enough to admit to themselves the actual condition. It is in just such conditions that an honest and careful accoucher can, by an acknowledgment which does him no harm, and by immediate treatment properly applied, often save his patient hours of suffering and the confinement and other objectionable features of a subsequent operation. "Murder will out" and conditions arise as a result of certain kinds of tears which will eventually compel the patient to seek relief.

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*Read before the Southern Kentucky Medical Association at Bowling Green, Ky., November 3, 1897.

As to why some births should be accompanied by extensive laceration, others with slight ones, of one variety or the other, I will not discuss, but will confine my remarks rather to the consequences thereof, and the treatment therefor.

The subsequent condition of the genital tract, and I might say of the generative organs, depends upon the character or direction of the perineal tear. A glance at the anatomy of the pelvic floor will make clear the reasons. I will first say that tears may occur in the median line, extending not deeply into the vagina, but involving the external structures, or they may extend in the median line some distance into the vagina, at times going through even into the rectum. In other cases we find that the tear has begun in one or both vaginal sulci extending towards the osteum vaginæ, and in a direction converging towards the median line, thence through the skin and possibly the anal muscle to the rectum. We therefore divide lacerations of the perineum into median and lateral. We may make a further division according to the extent of the tear, into those of the first and second degree, and complete lacerations.

I would call a tear of the first degree one which extends to the sphincter muscle, but not involving any of its fibres. One of the second degree extends through the sphincter muscle, whereas a complete tear enters the bowel, and usually extends some distance up the septum, or there may be slight lacerations involving only the fourchette. We also have tears known as transverse, which most often, though not always, occur without any rupture of the mucous membrane. Tears occurring exactly in the median line may never give rise to any serious consequences. The woman may never consult a physician for these lacerations, even though extensive, provided they do not involve the sphincter muscle, and are unaccompanied by incontinence of feces. Lacerations involving either or both of the lateral sulci, extensive or slight, give rise sooner or later to very unpleasant consequences, such as may make the woman very uncomfortable, or even a confirmed invalid, and if a doctor is not consulted it is purely from modesty or because she thinks these things are natural to all mothers.

To understand the effect of a laceration it is essential that we should bear in mind the anatomy of the perineum. We find going from the external or skin surface that we come to two layers of fascia, a superficial and a deep layer. Under this we find extending from each lateral pelvic wall, arising from the bony structures and attached to the lateral vaginal wall, two muscles, viz: the transversus perinei. Extending around in an anteroposterior direction, arising from tendinous tissues about the clitoris, we find the spincter vaginæ, or bulbo-cavernosi muscles, under these the anterior and posterior layer of the triangular ligement, and last and probably more important than any, the levator ani. The fibres of the transversus perinei coalesce, to some extent, with those of the sphincter vaginæ, and acting in unison, tend to draw the vagina upward and forward; they are assisted therein by the levator ani, probably the most important of all the structures which go to make up the pelvic floor. The levator ani, arising as it does, in front, from the pubic bone, and at the sides from the tendinous arch of the pelvic fascia, passes back and encloses by its inner fibres the vagina as in a sling. Its action is similar to that of the other two muscles spoken of. It and the sphincter vaginæ are inserted in a tendinous median raphe, consequently if a tear is directly in the median line, their fibres are not torn, and their insertion is not materially interfered with, therefore each muscle acting from its point of origin still tends to draw the vagina forward and upward, in this way supporting the pelvic structures.

If we examine the vagina in transverse section, we find it bears a resemblance to the letter "H," the anterior and posterior walls lying in apposition, leaving a slight slit between them which forms the bride between the two verticals in the H. The arms of the verticals are made by the sulci anteriorly and posteriorly, and they tend to diverge from the connecting bridge or slit. It is for this reason that we find tears are relatively infrequent in the median line, but occur in one or the other of the posterior sulci, they being the points of least resistance. If we introduce the finger within the vagina we can feel in the posterior sulci the pelvic structures which support the floor of the pelvis forming the perineum; they are felt as a tense, resisting band, about half an inch in thickness. So much for the anatomy of the perineum.

As I have said, it is the lateral tears which lacerate the fibres themselves, composing the muscular structures here, followed by the conditions which may cause chronic invalidism. These tears, if not repaired at once, may cause sub-involution of the vagina and the uterus, rectocele, cystocele, or even uterine prolapse, with complete descent in aggravated cases. Picture the condition!

Now what can be done to prevent or overcome this? In a certain number of cases it is absolutely impossible to avoid damage to the pelvic floor during childbirth, no matter how expert the obstetrician may be, and I take it that no man need be ashamed to acknowledge to the patient or to the world that this accident has occurred, and an honest man will acknowledge it. Early recognition of this accident is then most desirable, as much can be done at this time by immediate operation towards the prevention of any future trouble. Of course at times we will meet with failures following immediate perineorraphy, and our cases could then be subjected to intermediate, or better still, a secondary operation. Still, a failure should not deter us from operating and thus benefiting and curing many others.

It should be a rule in every case of labor, either in the primipara or the multipara, to visually as well as digitally inspeet the perineum, the vagina and the posterior vaginal wall. It is often impossible to recognize a torn vagina or perineum without the introduction of an anterior retractor and visual inspection. Inspection of the external or cutaneous surface is not sufficient, as it may not be torn, and extensive laceration still exist within. Should a tear be found, a Sims speculum should be introduced along the anterior wall, and the torn surfaces after being trimmed of all lacerated and bruised tissues, should be immediately united. Should union fail to take place, or should the laceration escape notice, and the woman come later for treatment, we will find the vagina gaping, bulging of the posterior wall in lateral tears, with possibly other conditions, and cicatricial tissue occupying the site of the old rupture. By intelligent operation these women can most all be cured, no matter how severe or extensive the tear.

Two operations bid for favor, the Tait or flap splitting, and the modified Emmet. The former is, in my opinion, of little value except for cosmetic effect, though it may do in some instances of median tear. Its mechanism, however, is not correct for those involving the integrity of the muscular structure itself. The operation par excellence for these is the Emmet, and while you are all familiar with the operation there are some points I desire to call especially to your attention.

First is the preparation of the patient: Because we do not enter the abdominal cavity, there are some who think that there is not such absolute necessity for the rigid aseptic precautions which are ordinarily taken. But disabuse your minds, it is just as essential that the vagina, what remains of the perineum, and the rectum, be just as carefully prepared as if we were about to do an hysterectomy or any other major operation. We must avoid, above all else, suppuration, for the least infection of a single suture may destroy the effect of the operation entirely.

As to the methods of preparing patients, instruments, and the sutures, I shall have nothing to say, as these are too well known to require repetition: Not only, however, is local preparation necessary, but the patient should also have her general system prepared, by purgation, accustoming her to remain in bed, and if there is the least falling below par, she must be toned up before anything is done. I recently met with a failure in one of my perineorraphies on account of the low vitality of the patient generally, which I think would have been avoided had I kept her upon tonics and built her up as should have been done. So much for the preliminaries.

Now as to the operation itself: Very few instruments are needed to do a perineorraphy, no matter what the extent of the injury. Primarily, a good anterior retractor, one pair of bullet forceps, two tenacula with full curve, a mouse-tooth tissue forceps, four or five hemostatics, one pair of scissors curved on the flat, preferably pointed, a sharp knife, needle holder and four fully curved needles, the Kelly being preferable, with silkworm gut and cat gut, is all that is required. Proper denudation is of as much importance as the suturing itself. At times we must carefully examine to find the cicatrix. It can always be recognized if we will remember that in cicatricial tissue there are no rugæ as ordinarily found in the vagina. Having determined the extent of the tear, we catch the crest of the rectocele, if a rectocele exist, and one will be found in all tears involving one or both sulci, transfix the labiae minorae at their posterior extremity just at the orifice of the vulvo-vaginal glands, and then with our knife mark out a triangular area in each sulcus which is to be removed. The knife is then swept around at the juncture of the muco-cutaneous surface uniting the two most external points that are to be denuded. This will give us an area marked out like the letter "M" with the two perpendiculars of the M diverging and united by a curved line.

The area thus marked out is rapidly denuded, using for this purpose the mouse-tooth tissue forceps to hold the flaps, and doing the cutting with our scissors. The two sulci can in this way be easily freed of all cicatricial tissue. We will have the posterior vaginal wall left as a tongue, and this tongue should easily meet the most external angles of denudation. Hemorrhage should be carefully controlled. This having been done we are now ready to pass our sutures, which we do in the following manner:

First a silkworm gut suture, which begins on the vaginal mucous membrane, and passes down parallel to the freshened mucocutaneous juncture, the needle emerging at the bottom of the sulcus; it is then re-entered on the other side at the bottom of the same sulcus, and passes up coming out upon the mucous surface of the tongue at a distance from its point equal to the distance which the external angle of denudation is from the point at which the suture entered. A suture is passed upon the opposite side in the same manner. These two sutures are of silkworm gut. They should be passed deep out, so as to catch the torn fascia and muscle. If they are passed just under the freshened surface they will do little or no good, but, as I say, we must go wide of the raw surface thus including the planes of fascia and the levator ani. This is very essential. These two silkworm gut sutures are now tied. They are the only sutures which are within the vagina to require removal. We will find that the calibre of the vagina is immediately lessened. The angles above these sutures are now closed in with interrupted sutures of cat gut. For this purpose I use a cat gut which I know to be sterile, and one upon which I have been depending for some time for abdominal work, which requires no further preparation and can be taken and used directly from the vials in which it comes. These sutures are made by the J. Ellwood Lee Company. For this work I usually use a No. C.

The next suture introduced is what is known as the down suture, and it is the one which lifts up the perineal floor to the level of the vagina and restoring it as nearly as it is possible to do. These sutures begin on the skin surface, and are passed in below the external angles. They are passed outwards and upwards emerging just under the mucous membrane of the vagina on the denuded surface. They cut the external angle, as it were. This suture is now passed under the mucous membrane of the tongue directly through it, transfixing it, then enters the denudation upon the opposite side just under the mucous membrane, and outward again upon the skin at a point corresponding to the one where it was first passed in. This is the third and last silkworm gut suture which we use. We will now have an open space beneath this crown suture, which is closed in with cat gut, sweeping the needle well out and passing it through the tongue each time. Two or three sutures will be all that are necessary. The tip of the tongue can be now brought in apposition with the tip of the denuded angle with cat gut sutures.

Those of you who have never seen the operation performed in this way will find it a revelation, as I did when seeing the suturing done in this manner for the first time. It is almost impossible to conceive of the difference which occurs in the appearance of the vaginal outlet when this crown suture is tied. At times it seemes as if you cannot get your anterior retractor out. Examination digitally will reveal a thick, strong and firm perineum.

The retractor being withdrawn, the vagina is dried with a small sponge the suture lines are dusted with iodoform or any other dressing powder that may be preferred, and the patient put to bed. Douches are not necessary, all that is required is to keep the lines of union as dry as possible. You are not annoyed, nor will your patient be, by the removal of vaginal sutures, as there are only two intra-vaginal to be removed, and these are near the orifice, the other suture to be removed is external.

The after care of the patient consists in catheterization every six or eight hours for the first few days; after that seeing that no urine escapes upon the line of union, and to move the bowels on the third or fourth day. This is best done by the administration of salines in small doses every hour, and the administration of an enema of warm water to soften the fecal matter as soon as the patient feels a desire to defecate. The sutures can be removed on the tenth day. I make it a rule to keep the patient in bed for two and a half to three weeks.

The repair of median lacerations is so simple and easy that little will be said upon that subject. I would only state that all scar tissue must be gotten rid of, and that if the laceration extends any distance up the vagina, be sure to unite the mucous surfaces and avoid all pocketing, pass the sutures well out and well under the raw areas.

If the sphincter muscle is involved, its retracted ends can be located by feeling upon each side a pit like depression. You will find that the corrugation, which is normal about the anus, will have disappeared except over an area corresponding to the area of the retracted muscle. The ends of the muscle must be denuded by picking up the tissue with forceps and snipping it out. The sutures are then passed upon the skin side well out, going through the muscle up under the mucous membrane to the border of the rectal mucosa, and out at a corresponding point on the other side. When these two sutures are tied, the rectum may seem to be drawn backward; a suture may even disappear within the anal orifice. We may know that the muscle has been caught and the torn ends approximated by recognizing a restoration of the anal corrugation.

If the mucous membrane of the bowel is torn through, it must first be united with buried cat gut sutures before the perineum is restored, and it is well in cases of this sort not to allow the bowels to move until about the fifth day.

There is just one condition that sometimes follows laceration, of which I desire to say a few words, i.e. prolapsus uteri. If the prolapsus is very slight, and the organ has not descended much, after the perineum is repaired, ventro suspension should be done. If the cervix is elongated, it should be amputated. If the prolapsus is complete, or is one that the text-books term prolapse of the second degree, the only thing that can be done is an hysterectomy. Ventro fixation, ventro suspension, nor any other operation will retain these uteri in their normal position, prolapsus will recur sooner or later and the woman will continue to lead a miserable existence until the organ is completely removed.

Selected Papers.

DISCUSSION ON THE TREATMENT OF SYPHILIS.*

By W. Whitla, M.D., Professor of Materia Medica and Therapeutics, Queen's College, Belfast; Physician, Belfast Royal Hospital.

THE treatment of syphilis is a wide subject and I feel honored at being called upon to open a discussion on it.

Whether this New World was the original home of syphilis or not we need not pause to debate, but the marked advances made in the study of syphilis of late years on the Continent of America make the present time and place most desirable for discussing the therapeutics of this interesting malady. At the start, permit me to say that I come before you not with new light, but for new light and knowledge, the aim of the officers of the Section being to elicit the views and experiences of the numerous observers here and in the United States. My duty will therefore chiefly lie in the selection of some of the most interesting and important debatable points in the therapy of the disease. Fortunately it is easy to indicate the main line upon which our discussion is to run, since there are but two drugs which need be considered—mercury and iodides. In the Old World there is a small and steadily diminishing number of men who adhere to the idea of a non-mercurial treatment of syphilis, but though I know nothing of the presence of such a minority in Canada or the States, I should be surprised to hear of it because I believe such a view would be at variance with the untrammelled progress in spirit which is the characteristic of the great Canadian branch of our profession.

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My own professional opinion was formed in a school where my two chief teachers were non-mercurialists, and I had opportunities of observing the results of expectant methods alongside those of surgeons who administered mercury, and I need not tell you that I have never treated a case of syphilis since without employing the drug. It may be taken as proven that mercury has a specific or curative action upon syphilis; we may thus limit our attention to the following points:—

1. How mercury and the iodides are supposed to act.

2. When should mercurial treatment be started? Especially should it be given in the primary stage?

3. The various methods for its routine administration and its dosage, and the length of time necessary for mercurial treatment.

4. The treatment of tertiary symptoms and congenital syphilis.

Notwithstanding the marvellous strides which pharmacology has recently made in elucidating the mode of action of many drugs it has almost thrown no light upon the therapeutics of the so-called alteratives. These agents when given in ordinary therapeutic doses to perfectly healthy individuals often produce no appreciable action, but when similar doses are adminstered in certain diseased conditions the disease disappears without leaving any clue as to the method by which the drug cured. This is frequently observed with mercury, arsenic, gold, iodides and colchicum. Addison and Cohnheim demonstrated that mercury had the power of arresting the suppurative process in the frog's mesentery by its paralysing effect upon the protoplasm of the cells.

The lethal action of the soluble salts of mercury upon the minute forms of life has been long demonstrated, and this will almost certainly prove the key to the explanation of the curative action of the drug in the secondary stage of syphilis. That syphilis is caused by a micro-organism seems certain, and it will be an easy matter to demonstrate the action of mercurials upon it as soon as it can be isolated and cultivated. Whether rubbed into the skin, administered by the mouth or other route, mercury and its preparations are absorbed and find their way into the blood. In ordinary inunction it is clear from the observations of Binz that the ointment is not absorbed through the uninjured epidermis or cutis vera, but that it finds its way in through the hair-follicles and sebaceous follicles, and through the orifices of the sweat glands. In a few days the globules become coated with oxide *in situ* and soon disappear into the blood after solution by the chloride of sodium, fatty acids, albumen, and glandular secretions, probably in the form of an albuminate kept in solution by the natural chloride of sodium. In a similar way the bichloride and other soluble salts are absorbed from the alimentary canal and insoluble salts like calomel are probably rendered soluble by the formation of an albuminate which is itself kept in solution by the chloride of sodium. Pure calomel dusted over the conjunctiva is soon found in the urine as a soluble salt of mercury (Kammerer).

It is thus obvious that in whatever form the metal is administered it finally enters the blood and there meets the syphilitic? which it destroys. I think it was Mr. Hutchinson who first spoke of mercury as a vital antidote to syphilis. The term is at all events used by some as implying that the metal is a poison to the living syphilitic organism in contradistinction to its action upon the chemical poison probably secreted by the parasite. There is another aspect of the question, which though it appears to be obvious is singularly overlooked, viz., that syphilis is a true vital antidote to the poison—mercury. In this statement will be found the key to the difficulty of dosage, duration of treatment, and many other puzzling questions. I believe that so long as the living virus of syphilis remains in the blood and tissues of the victims of this disease mercury will spend its poisonous force upon the virus without fear of injury to the patient. As soon as the living antidote to the mercurial poison is exhausted or destroyed, then, and not till then, will mercury begin to act deleteriously.

If this be accepted as true or probable a working hypothesis is at once obtained for the dosage. It is well known that small doses of mercury have been found to exert a tonic action upon the non-syphilitic patient, and that marked increase of weight sometimes follows its administration, but it is almost certain that even these small doses if prolonged will cause general deterioration of health. Doses which the syphilitic patient can tolerate without the slightest inconvenience would soon cause serious injury to the perfectly healthy subject. This is especially evident in congenital syphilis, where one sees puny and apparently dying children thrive and grow fat and ruddy upon an amount of the metal which would probably cause death or serious injury to perfectly healthy infants. Mercury acts also in syphilis upon the morbid cell growth which is characteristic of the disease. We have a demonstration of this when the ointment is gently rubbed over a patch of the secondary eruption, or more strikingly when calomel is dusted over condylomatous growths. The specific cell growth is rapidly and painlessly destroyed.

The metal is eliminated in all the excretions of the body, and Oberländer found that the kidneys continue to throw it out for more than six months after the last dose has been administered.

The action of the iodides is not so simple. It is generally taken for granted that, as iodides of sodium and potassium are not germicides, therefore they do not act upon the living virus of syphilis. The generally accepted view is that the iodides act solely upon the cell growths which are so characteristic of the disease. Thus Brunton believes that the iodides act upon the tissues and not on the poison. He likens the syphilitic process to the growth of the caterpillar in the oakgall, and he believes that large doses of the iodide act upon gummatous tumours, which he regards as analogous to the galls, and they spare the poison or caterpillar, which then goes on to form other gummatous deposits. This is possibly an analogy to which exception may be taken, since it is probable that there is no caterpiller in the tertiary stage. Most authorities state that iodides have no visible effect upon the syphilitic germ in the early stage of the disease, but that in the late secondary period they markedly assist the action of mercury in destroying the cell growths;

in the tertiary stage their influence is most striking and sometimes may be styled marvellous, but it appears highly probably that their influence is not permanent unless supplemented by mercurials. It is not, however, safe to assume that the iodides exert no germicidal action in syphilis, since Binz has demonstrated that they are readily decomposed by living protoplasm, which under conditions identical with those in the living body immediately sets iodine free in the tissues, and he strongly holds that when we see tumours or swellings cured by the internal administration of iodide, we are justified in assuming that in them the liberation of iodide (which is easily demonstrated when carbonic acid, protoplasm, and iodides are brought together) is continually going on as long as the iodide circulates in the blood and that the free iodine gradually destroys the cell growths or the micro-organisms which produce the tumors.

Passing over numerous interesting speculations we come to the second point for discussion—when should treatment be commenced? Thanks to the brilliant labours of Taylor, we need not pause to discuss the value of excision of the chancre; he has demonstrated the folly of such a procedure.

Hutchinson and those who follow him strongly advocate the administration of mercury as soon as the state of the sore permits of diagnosis. He affirms that if this be done, "the patient will usually escape both sore throat and eruption," and "that it is thus perfectly possible to suppress syphilis and to prevent the occurence of any of the humoral group of symptoms." The conclusions of Hutchinson are obviously open to certain fallacies, but he has evidently discounted these, or allowed for them, and in the numerous host of cases treated upon this plan by careful observers there appears to be strong presumptive evidence that many of the cases in which no secondary symptom appeared were cases of genuine syphilitic chancre which would have exhibited secondary symptoms had the antidote been delayed in its exhibition.

Perhaps no single point in the problem of syphilis has been so hotly debated as this so-called abortive plan of treatment. The term is an unfortunate one, and has led to misconceptions. Thus, theoretically speaking, it might be proved that it afforded the most successful and satisfactory method of treating syphilis, though it might be impossible to prove in a single case that real abortion of the disease had occurred.

Mr. Hutchinson has been equally unfortunate in his description of the method as regards dosage, which he styles as "the continuous use of small doses over long periods," but this will be referred to presently. I have satisfied myself in many cases of the absolute truth and accuracy of Mr. Hutchinson's results, and in a few I believed that secondary symptoms were entirely prevented. One arrives at such a conclusion by observing the faint rash which appears at a late period if the mercurial be suspended, and the absence of rash in those cases where the drug was not stopped but used continuously for a long time. Taylor and Kaposi and others are, upon the other hand, satisfied that no advantage or possible benefit to the patient is lost by withholding mercury until the onset of the second stage. These authorities affirm that his syphilis will be more orderly and more amenable to treatment, and that there will be less difficulty in the mind of the physician and of the patient in pursuing a vigorous mercurial course. It cannot be denied that it is often impossible to get patients to submit to prolonged mercurial treatment in the absence of evidence that they are really suffering from genuine syphilis. This is a very serious objection to the so-called abortive plan. The physician, after say four months' mercurial treatment, may pause and say to himself possibly, "I am giving mercury to a patient who, though he has had a hard, indurated sore, may not have any syphilis." This is a still more serious objection, and proves that mercurial treatment should not be actively commenced till the induration is such as absolutely satisfies the attendant that he is dealing with the primary stage of a true syphilis.

We may look forward with hope that the experiences of the eminent observers who are expected to join in this discussion will assist us in coming to a conclusion upon two distinct points. First, is it possible to abort syphilis by giving mercury in the primary stage? Second, if this be possible, is the plan one that can be used as a routine practice in treating syphilis. We may pass on and consider how the use of mercury will best meet the needs of the syphilitic patient who comes before us with the skin eruption just out. All will agree that now no delay in the exhibition of the remedy should take place, but there is the widest difference of opinion about the best way to administer the drug. Two plans are recognised: (1) The continuous method, and (2) the interrupted. The first method is that advocated by Mr. Hutchison and pursued as part of his abortive plan. He describes it in his last article as that of the continuous use of small doses over long periods. It is called by others the tonic treatment.

It will be observed at the start that his dosage is hardly what he describes himself, and certainly not what many of his opponents designate it as—the method of using infinitesimal doses of mercury.

The preparation which he selects is hydrargyrum cum creta, and he administers it in the pillular form with opium, and he gives 1 gr. of the mercurial preparation four, five, six, or seven times a day, regardless of meals, his object avowedly being to get in as much mercury as possible without causing salivation or diarrhœa. In the course of twelve months' treatment the patient would have swallowed 2,500 grs. grey powder, or over 800 grs. of mercury, if the maximal doses of the preparation were adhered to. When this treatment has been commenced during the primary stage and contined for nine or twelve months, Mr. Hutchison, as before stated, affirms that the syphilis may be wholly suppressed.

I think you will agree with me that, omitting the consideration of the period at which this treatment is commenced, the dosage is almost as orthodox as the most ardent mercurialist can desire. Practically, it only differs from the interrupted plan, not in giving so much less mercury but in giving it for a longer period without rest or suspension. My own experience has satisfied me that many patients cannot stand a larger dosage, and that most will be unable to bear this amount for more than six or nine months. When we study the reports and writings of syphilographers one cannot fail to be struck with the numerous points at which these so-called rival treatments fuse and become indistinguishable.

A strictly tonic mercurial treatment is useless. If mercury be given in such small doses as would improve the tone of a healthy man, this dosage will be futile when administered to a syphilitic subject, and the long continued treatment of syphilis by minute deses of mercury must be condemned. In practice the distinctions between the continuous and interrupted plans break down. One physician starts to treat a case as an ardent admirer of the continuous plan; he endeavors to get in as much mercury as possible without injury to his patient, but he will often find that he has misjudged his patient's powers, and he must stop at the end of four or six months, and give him a rest. Another starts with the view of saturating the system with the metal, and finds just when he intended to stop and interrupt the treatment that some suspicious symptom warrants a continuance for several months, and the case becomes one treated almost continuously.

My own limited experience is decidedly in favor of making the treatment as continuous as possible for at least nine months after the appearance of the eruption. I believe this is less likely to lead to relapses and early tertiary symptoms than a four or six months' course of greater severity. The great problem in the successful treatment of syphilis is the dosage. This it is impossible to know before trying, and it is well to have no very firm preconceived notion upon the number of grains, or even the exact mercurial perparation to be adhered to. The antidote must be given not by arithmetical calculation but by sound common sense. It must be given in proportion to the amount and activity of the virus present and with due consideration to peculiarities exhibited by the patient, the one aim of the medical man being to get as much mercury into the patient's blood as possible without producing any injury to his tissues or organs.

The condition of the gums is generally regarded as the test for the dosage. It is a most fallacious test; the same holds good for the bowel. Very large amounts of mercury are administered at Aix without the slightest effect upon the mouth, because I believe that nowhere is such scrupulous attention paid to the state of the gums. This detail of putting the teeth, gums, and mouth into a healthy state prior to treatment, and maintaining them in this state all through the mercurial course is of the most vital consequence to success. I know of no other detail to be compared with it in importance. Vegetable astringents, like rhatany, and catechu alternating with alum solutions and carbolic washes, should be most religiously employed during the months of treatment.

As a matter of fact, I have scarcely ever used opium with the mercurial. Should the bowel or stomach rebel, which is exceedingly seldom, I give them a rest and resort to the skin.

The syphilitic phenomena, that is, the rash, patches on the tonsils, condylomata, iritis, etc., afford a better indication for dosage than the mouth. If these remain uninfluenced or not sufficiently influenced, mercury may still be pushed fearlessly. As long as there is abundance of syphilitic virus, the drug may be pushed and the secondary manifestations are a rough estimate of the amount and activity of this virns.

But what indication has the physician for further dosing when these disappear and the mouth keeps healthy? Here, permit me to say, is a vital point. I believe body-weight affords the best of all guides. There is little danger (perhaps none) of doing any injury to a patient by mercury as long as he keeps gaining in weight and is not markedly anæmic. For nearly twenty years I have made careful weighings every fourteen days or more of all syphilitic patients, and soon one comes to know much of what is going on in the battleground between the virus and the antidote by placing the patient in the balance.

In a severe case of syphilis, especially in the late secondary stage, a weight chart is as essential as is the temperature chart in a case of grave typhoid. When weight falls without obvious cause the metal must be suspended (iodides come in here with benefit). Often a fall in the body weight is the first sign that the syphilitic virus has been completely destroyed. This may be seen in the abortive plan of treatment, and may be taken as indicating that the mercury is beginning to cause deterioration of the blood, and increased metabolism having no longer its syphilitic antidote present to neutralise its action. These weighings, when possible, should be made upon an accurate machine in the physician's study.

The length of the course should be determined, in my opinion, not by any preconceived rule. I hesitate to state this (almost in the phraseology of a law) in the presenee of so many distinguished members of the profession, many of whom, I have no doubt, have had larger experience in the treatment of this affection than myself.

My experience as a teacher has shown me how dangerous it is, in a combination of circumstances like those under consideration, to place before the student mind the cut-and-dry formula that syphilis should be treated by any special mercurial salt in any fixed doses, for any given number of months under any hard-and-fast continuous or interrupted plan. We all know how prone such formulæ are to become lifelong rules of procedure. Each case should be treated upon its own merits, and the plan intelligently modified, and, above all, the duration of the course decided by the results, no two cases, perhaps, running exactly alike. After, say, nine months of the continuous method, if it has not been found necessary to interrupt it before, the patient may have a complete rest for two or three months, should no trace of the disease be present. It is a good plan, then, to give a mild mercurial course, combined with iodides every alternate six weeks for nine months more, and finally, after a rest of two or three months, a three months' course of fair doses of the iodide should complete a two years' course in all.

Sir William Gowers, in his Lettsomian Lectures, recommends that every syphilitic subject for at least five years after the date of his last symptoms should have a three weeks' course of treatment twice every year, taking for that time 32 or 30 grs. of iodide a day, and he asks, if this practice were generally adopted, is it not reasonable to anticipate that grave lesions would be much more rare?

Time does not permit me to dwell upon the great importance of a wisely regulated diet, with hot or Turkish baths, occasional changes to the seaside, with the necessary restrictions regarding alcohol and tobacco, and the avoidance of every conceivable depressing agent.

It will now be necessary to glance at the different methods of administering mercury by the mouth and the skin. The method of injections will be dwelt upon by a later speaker. A favorite mercurial preparation on the Continent, and as far as I can judge in America, is a substance which is much less used in England, that is, the protoiodide or green iodide or mercurious iodide, prepared by rubbing iodine and mercury together. Owing to its liability to decompose it has been rejected from the

German and British Pharmacopæias. Taylor begins with three daily doses of $\frac{1}{4}$ to $\frac{1}{3}$ gr. This dosage in a few days is increased to 1 gr. three times a day, which is be kept up for six months. He states that it is rarely necessary to give more than 3 grs. of the protoiodide in a day, and that most cases will do with about 2 grs. or even less, and he condemns the combination of opium with the drugs as unnecessary and mischievous.

Milner states that of all the forms of syphilis the vesicular rash is the most difficult to deal with. It is most frequently seen in fair-haired patient, chiefly women, and in those who drink large quantities of wiae. For such the green iodide should always be selected. He urges the importance of the difficulty in treating barmaid's syphilis and of checking the disease in actors, commercial travellers, billiard markers, and the class of syphilitic patients who sit up late at nights. For all of these the iodide should be preferred to every other preparation of mercury. It appears to be the most active form for administering mercury in the early stages, but it is doubtful if it be so valuable or active later on. My own feeling is that it is not so manageable as the grey powder, but this may be entirely a matter of practice or of experience. Grey powder, that is mercury rubbed up with two parts of chalk, as already stated, is Mr. Hutchinson's choice. Though he recommends up to 6 or 7 grs. daily, I believe 3 or 4 grs. daily for nine or twelve months will meet all the requirements of the great bulk of cases.

My own practice is to adminster calomel beginning with two Plummer's pills, 5 grs. each daily. Such a dose will contain 1 gr. calomel, 1 gr. sulphurated antimony, and 2 grs. guaiacum resin. The bowels are seldom influenced, and ptyalism is rare when the mouth is well cared for. After a week or ten days 3 pills may be given daily, and I believe it will be found an advantage to change the calomel to corrosive sublimate after about three months, and to combine iodides with it. As soon as the calomel influences the bowels I give the grey powder.

Blue pill does not seem to be a favorite amongst specialists; it appears to be more difficult to manage and more liable to cause salivatiou and diarrhœa when pushed for any length of time. It is the preparation which may be selected for a preliminary smart attack upon the disease for a few weeks, and in those cases not seeking early advice. When signs of ptyalism do show themselves under such circumstances I think they can be more quickly suppressed or checked than if produced by any other mercurial, even when another mercurial preparation in moderate doses is administered immediately upon stopping the blue pill.

There is much to be said against chopping and changing the mercurial during a course of treatment, but there is also something to be said in favor of it. I believe one can often get in more of the metal in this way. Suppose under any preparation signs of ptyalism suddenly show themselves without being able to offer a working hypothesis, I think it will be found that a change of the preparation often will more effectually restrain this than if the drug be stopped altogether. Excellent results are obtainable by using the red iodide, the tannate, and the bichloride.

It seems certain that the statement of Victor de Mèric is correct, that is, that it does not matter in what form mercury is given, provided that it be kept up for one, one and a half, or two years at least. All practitioners complain of the great difficulty of, getting patients to adhere to the treatment for a sufficient period. It cannot be denied that this difficulty is greatly increased by the habit of some physicians in selecting a particula form for their mercurial preparation which they adhere to rigidly, and the patient wearies of the pill, powder, or mixture, and throws it aside, whilst he might be tempted to continue longer had the same dose and mercual preparation been given in an altered pharmaceutical form.

The necessity of keeping the patient in a condition which will enable him to pursue his ordinary avocation has compelled me to describe a plan of treatment which is far from an ideal one. Thus if the subject of syphilis should be amongst the ranks of the wealthy and should he have the misfortune to belong to the idle class a more certain and efficacious plan of treatment might be easily marked out for him provided he were willing to devote all his time to the therapeutics of the disease. Such a plan would be the inunction method, at which we shall now glance for a brief moment.

The ointment of the *British Pharmacopœia* is much too strong, and the German *Pharmaeopœia* preparation is preferable in every way. It contains one part of mercury rubbed up with two parts of a mixture of lard and suet. With such an ointment every case of syphilis can be treated more certainly and more rapidly than by all plans of mouth medication. It is very inconvenient requires care, often the aid of an attendant, and the free use of baths; it exposes the secret of the patient's malady to those about him, and soils his bedclothes and undergarments. These are reasons which will probably always operate in preventing the inunction plan from becoming a routine method of treating syphilis. Nevertheless it is the best of all ways for treating the disease, and in some cases it is absolutely essential to the patients life that he resort to it.

By a careful attention to the state of the patient's mouth enormous quantities of the antidote to syphilis may be introduced into the system without producing any effect whatever beyond the rapid cure or total disappearance of all syphilitic symptoms. I do not know of any more marked and unmistakable result in therapeutics than the results of this method in severe cases of syphilis. It may be used with advantage in all cases, but there are cases where it becomes the duty of the physician to insist upon the method by inunction: (1) In all grave attacks of the disease where the symptoms set in with unusual severity it should be resorted to. (2) In all cases where time has been already lost and the patient has not sought advice till the secondary phenomena have been in full swing for several weeks, as, for example, when the patient first seeks treatment for a retinitis, iritis, or otitis. (3) In nearly all cases of cerebral syphilis and where spinal symptoms supervene at an early stage. (4) In syphilis appearing under certain conditions after marriage. (5) In so-called malignant syphilis.

To carry out the inunction method properly it is almost essential that the patient gives himself up entirely to the treatment. This is the explanation of the very superior results obtained by the use of the ointment. One cannot say that in order to use inunction the patient must give up all business and keep to his house, but if he is able to do so, larger doses can be safely administered and much time saved. My own observation leads me to believe that where a patient, especially in the winter season, insists upon attending to his ordinary business, as good results can be obtained by grey powder, the green iodide, or calomel by the mouth. But if he can devote himself to 75 or 100 inunctions as carried out at Aix-la-Chapelle we can confidently assert no better or more certain results can possibly be attained in the treatment of syphilis.

During the carrying out of a mercurial course by the mouth where the secondary signs do not show a tendency to disappear great benefit may be obtained by suspending the pills and beginning inunctions. In the late secondary stage it is often an excellent plan to rub in the ointment and give the iodide by the mouth. The plan cannot be properly carried out withot a good warm bath (to 98°F.) and a mild rubbing with carbolic soap, and occasionally the sponging of the body with weak permanganate solution. After thorough drying with warm linen towels, the ointment (33 per cent.) and recently manufactured, may be rubbed in. As regards dosage a good average rule will be 1 drachm or 60 grs. of this ointment to be used daily. At Aix the practice is to rub 30 grs. of the ointment twice a day into the different regions of the body. Thus the professional rubber takes the requisite amount of the drug, and after squeezing it between his palms he rubs it upon the first day into the skin over the inner sides of both arms, upon the second day the skin over the inner aspect of the thighs is attacked, and so on, winding up with the back on the sixth day, and a rest upon the seventh. After each rubbing the patient puts on a flannel gown, and without washing, goes to bed. The warm bath is resorted to in the mornings.

In severe cases double this amount of the ointment may be rubbed in. Thus in cranial syphilis I have resorted to ʒ j morning and evening for some weeks without producing salivation. As in the plan of mouth administration, each case must be closely watched and the dosage modified by the effects produced. Twenty to thirty minutes generally suffice for each inunction, and hairy parts mutt, as far as possible, be avoided, or shaving may be resorted to. A distinct advance has been made in the treatment of syphilis by the observations of Taylor, who first pointed out that the small round cell infiltrations which surround the lymphatic and vascular channels are liable to break out into fits of active proliferation after apparent dissolution by mercury. In this way a general infection may occur after a period of latency or apparent cure, and hence the vital importance of attacking as large an area of the cutaneous surface as possible during the inunction course, with the view of destroying all foci of the disease. There is, therefore, good reasons for regarding inunction as an indeal plan, being a combination of the loeal and constitutional methods, even when commenced in the secondary stage of the disease. This consideration also would seem to support the view that the continuous plan should give better results than the interrupted. With the view, therefore, of allowing as few foci as possible to escape, Taylor divides the surface of the body into eleven regions, which are all vigorously attacked by the ointment. An ointment of white precipitate (6 per cent.) may be applied to the scalp and beard: In this way there can be little doubt that his plan is better than the older methods. It has the one drawback of demanding the aid of a rubber or attendant, as the patient cannot possibly reach the dorsal regions.

With care in severe cases, as many as 100 inunctions may be accomplished without producing salivation, but in practice it will generally be found that the rubbings must often be suspended for a few days at a time in the presence of signs of threatening saturation; and it must never be forgotten that salivation may more suddenly appear and be more severe than in the mouth administration. Hence the necessity for greater care and watchfulness and scrupulous attention to the state of the mouth and gums. It does not appear that any special virtue attaches to the sulphur baths or waters which are so often made a portion of routine inunctions in various Continental resorts.

Time does not permit me to touch upon the methods of treating syphilis by mercurial plasters, soaps, fumigations, thermal and other baths. As a rule, they are not suitable for routine, though all-valuable under certain conditions. As already stated, the officers of the Section will welcome any expression of opinion from anyone who has special experience in their use, or in the practice of treating the disease by hypodermic or deep injections of mercurial salts.

Our next consideration is the place that the iodides should take in the routine treatment of syphilis. If we believe that they have, like mercury, a germicidal action as well as a destructive effect upon the cell formations, theory would suggest that we should begin the campaign with these drugs in conjunction with mercury; but practice teaches us that they are of little, if any, use at the beginning of the secondary stage, and some authorities go so far as to state that iodides in the exanthem stage of syphilis do considerable harm.

I think I am correct in saying that in the great majority of cases of syphilis most authorities would agree in saying that the iodides need not or should not be given in the secondary stage at all, and perhaps all would agree that for the first six months iodides should be administered.

It is of importance to consider what are the conditions justifying the exhibition of iodides in the secondary stage. Hutchinson states that they should be given when the bone pains are severe, or when the mucous membranes suffer severely; but clearly there are other conditions which demand iodides in combination with mercury, and these are the supervention of symptoms in the secondary stage, which generally are to be considered as usually tertiary manifestations, such as brain and spinal complications, that is, convulsions, paraplegia, and swellings or new growths appearing anywhere, as in the testicles, liver, or spleen. Eye and ear complications call for iodides early. In all these exceptional instances, the iodide of sodium, which is preferable to the potash salt, may be given with the bichloride of mercury in solution; but since all these cases belong to the category of severe cases, by far the best rule is to commence inunctions without severe delay, and give the iodide in full doses by the mouth.

I think another indication for the administration of iodide even at an early stage is marked febrile or fever temperature. The drug appears to possess a distinct power over the temperature in the eruptive stage, and since it effectually depresses the fever it may safely be employed when this is a marked feature.

After termination of a six or nine months' course of mercury, when the secondary symptoms have disappeared, the French practice of a two or three months' course of doses of the iodide is an excellent one.

As regards the treatment of the tertiary period little need be said. When the disease in the secondary or primary stage has been treated in the thorough and energetic manner described, no tertiary symptoms will likely ever be manifested. The majority of cases presenting tertiary signs are found among those where mercury had been given only for a short period, or not at all. Often they are met with where a mercurial course has been commenced with severity, and where the salivation had caused the treatment to be soon suspended and never again resumed.

There can hardly be a doubt about the wisdom of immediately commencing treatment by large doses of iodide. But the very striking power of the drug over gummatous growths sometimes causes the physician to trust to it alone. Striking as these results are, they will not prove permanent without iodide after the melting away of the gummatous mass, a recurrence at the old or an appearance at a new site generally may be expected. Mercury in the form of bichloride should be given in solution with the iodide, or the latter may be given by the mouth whilst mercury is administered by the skin. There are two well-marked peculiarities in the action of the iodide which must be remembered. First is the fact of idiosyncrasy which is more frequently noticed in the case of this drug than in any other remedy. The symptoms of iodism generally follow upon small dosage, and they frequeutly disappear upon doubling or quadrupling the dose. Now and then one meets with a patient where the drug produces such serious symptoms that it cannot possibly be administered in any way; such cases must depend upon mercury. They are exceedingly rare.

The second point about the action of the iodide is still more important, it affects the question of dosage in a way which is seldom observed in the treatment of disease by any other remedy. I have many times satisfied myself that these gummatous growths will flourish for many months and even years under a certain dose of the iodide taken regularly. Upon markedly increasing the dose a visible result may be obtained in seven or fourteen days and the tumor may disappear entirely in a few wdeks. Eor instance, a patient with a large gumma on the sternum took 20 grs. of potassium iodide daily for six months without the least result; upon increasing the daily dose to 60 grs. all traces of the tumor were removed in three or four weeks.

This happens so frequently that it cannot be regarded as a coindence. It is not observed when mercury is being given at the same time. Hutchinson insists that ammonia should be invariably given with the iodide, and it would be interesting to have the experience of some of the subsequent speakers upon this point. A very important matter is the duration of the iodide treatment in tertiary syphilis, and here a very valuable result may be gained by this discussion. Sir William Gowers maintains that it should never be prolonged beyond a period of six to ten weeks, and he is satisfied that grave danger may follow a further prolongation. Milner states that iodide of potassium, though useful in syphilis, had no curative action whatever. "In overdoses it was almost as detrimental as mercury, patients had their brains and very special sense destroyed, their legs and bellies got fat, and they looked and acted like eunuchs, having no more power than them." It has been my own practice to give iodide often for four or six months without intermission, and I have never even in full doses seen any serious results, and I have known patients keep up the drug for twelve months without any injury.

It was my intention to dwell upon many other important points in the therapy of syphilis, but when I realised the short space of time which was available for the entire discussion I endeavored to select a few only of the most interesting and practical aspects of the subject, and to bring these before you in the briefest possible way. When, however, I learned from the pages of the *British Medical Journal* that this Section was to be honored by a visit from the Section of Dermatology, it became my duty to omit even much of what I had already written, including the interesting side of the treatment of the congenital affection, and it remained for me to put a few points in the shortest and most condensed manner, so that time might be available for those members of both Sections to join in the discussion.—*Br. Med. Jour.*

NORTH CAROLINA MEDICAL JOURNAL.

ROBERT D. JEWETT, M.D., EDITOR.

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This JOURNAL is published on the fifth and twentieth of each month, and any subscriber failing to receive his copy promptly, is asked to announce the fact to this office.

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Secretaries of County Medical Societies in the Carolinas are asked to furnish condensed reports of their meetings to the JOURNAL.

All communications, either of a literary or business nature, should be addressed to, and any remittances by P. O. Order, Draft or Registered Letter, made payable to ROBERT D. JEWETT, M.D., P. O. Drawer 825, Wilmington, N. C.

Editorial.

WRONG USE OF OFFICIAL POSITION.

In a recent editorial, in the *Journal of the American Medical Association*, advocating the establishment of a Department of Public Health, an acrimonious attack was made upon the Marine Hospital Service, and especially upon the head of the Bureau, which was entirely uncalled for and undeserved. The Marine Hospital Services is charged with inefficiency in the management of the recent outbreak of yellow fever and also of the outbreak at Brunswick, two or three years since. The facts in the case which are well known to the profession convince us that the charges grow out of the personal animosity which exists between the Editor of the *Journal of the American Medical Association* and the Surgeon General of the Marine Hospital Service. We do not believe that the members of the Association will give their approval to the course the Editor of their Journal has taken, in using his official position as a vantage ground in an attempt to create a sentiment intended to injure a political rival. We believe it is the opinion of the profession generally that both of these epidemics were managed as well as it was possible for them to be with the present power of the Marine Hospital Service, and that the results were certainly no worse than would have been the case had the Editor of the Association Journal not been succeeded in the office by the present head of the Bureau.

We have not been thoroughly convinced that, with an extension of the power of the Marine Hospital Service and a proper co-operation of State Boards of Health, this body of capable, and experienced sanitarians, working under military discipline, would not accomplish better results than would the unwieldy and untried body which is proposed, the conferences of which, with their innumerable delegates, are likened by a contemporary to the assembling of a third House of Congress. But some people can see no good in anything in which they do not have a guiding hand. While it is eminently proper for the Editor of the Journal to labor for the passage of the bill which the Association approves, he certainly oversteps the bounds of propriety when he allows his personal quarrels to step into his editorials. and such action will not increase the usefulness and popularity of the Association's Journal.

Reviews and Book Notices.

The Physicians Visiting List for 1898, published by Messrs. P. Blakiston Son & Co., Philadelphia, is ready. We are pleased to see that there is a tendency to cut out some of the medical literature that has been finding its way into these books. Most of this matter is out of place here and uselessly cumbers the volume. What has been retained in this List will prove a convenience to the physician, but more still might be omitted. It is not, or should not be necessary for the physician to carry about with him rules for treating asphyxiated persons, for reducing the readings of different thermometers, or for ascertaining the day when labor may be expected. The suggestions in metric prescription writing and the table of doses in Apothecary and Metric systems are useful in the att mpt to popularize the latter. The List has the usual departments for daily records and various memoranda. It is bound in flexible cover and the price remains the same—25 patients a week $1.00; 50 patients a week $1.25; the same in two volumes $2.00; perpetual $1.25.

Traumatic Injuries of the Brain and Its Membranes, with a Special Study of Pistol-Shot Wounds of the Head in their Medico-Legal and Surgical Relations. By Charles Phelps, M.D., Surgeon to Bellevue and St. Vincent's Hospitals. With Forty-nine illustrations Cloth, royal octavo, 582 pages. D. Appleton and Company, New York. 1897.

The fact that this work is not a rehash of books that have been written before, but is the practical outcome of actual work done by the author, makes it one of the most useful contributions to recent surgical literature and places it in the front place among treatises on brain injuries. It is based upon an observation of five hundred consecutive cases of recent occurrence, which are so varied in character and in many instances so complete in historic and necropsic detail as in themselves to afford material for a comprehensive study of intracranial trammatism. Striking evidence of the great good derived from modern antiseptic methods is exemplified in the author's statement that "the picture they represent is incomplete only in the illustration of secondary pyogenic infections involving the brain substance."

Injuries of the brain come occasionally under the treatment of all general practitioners and the result in so many cases depends upon the cool judgment and courage, coupled with a safe conservatism, of the physician, that it is his duty to prepare himself as thoroughly as possible for these emergencies. The work before us commends itself as a fully sufficient guide for all who desire to treat these injuries intelligently. In the diagnosis of injuries of the head stress is laid upon the imperative duty of the surgeon in determining the condition of the skull. It may be briefly stated that "facture of the vault is to be recognized by tactile and visual sense; that these methods are always practicable; that no others are defensible; and that there is no justification for the neglect to resort to both when one is insufficient for exact diagnosis. . . . This covers the whole ground of diagnosis—tactile or visual examination, and, if necessary to that purpose, unhesitating and sufficient incision down to the cranial surface." In regard to prognosis the author states that in themselves "cranial fractures are important only in exceptional cases. Their prognosis is really the prognosis of their complications. Neither the shock of an uncomplicated fracture nor the hemorrhage from the osteal vessels is ever fatal." Therefore in the study of these injuries the classification is made only of the concomitant injuries or complications, viz: Hemorrhages, thromboses of sinues, contusion, lacerations, together with their sequelæ, meningeal and parenchymatons inflammations and atrophy. These are studied in relatien to their pathology, symptomatology, diagnosis, prognosis and treatment, and constitute part I. of the volume.

Part II. is devoted to the consideration of pistol-shot wounds of the head, being based upon a series of experiments upon the cadaver. This study is accompanied by a number of full-page photographic plates showing beautifully the nature of wounds inflicted by pistol-shots from various distances. The appearance of the cutaneous wounds and of the entrance and exit wounds of both surfaces of the cranium is given. These injuries are studied in their medico-legal and surgical relations.

Following this are the condensed histories of three hundred intracranial traumatisms in which are given the symptoms as regard external wounds, hemorrhage, mental condition, nervous condition, etc., and the lesions as determined by necropsic examinations. This report embraces nearly two hundred pages. The volume is not provided with an index but the table of contents is so complete as to render this a minor defect.

Correspondence.

Cedar Creek, N. C., Dec. 8, 1897.

Editor N. C. Med. Jour.:

Thinking that the following case might be of interest to you and the physicians of the State, I submit it for publication:

December 1st, I was called to a boy nearly grown, complaining of slight stiffness and pain about the muscles of neck and limbs. He said he had been hauling brick from Fayetteville, a distance of 9 miles, and as the weather was a little breezy, he thought he had taken cold. His temperature and pulse were normal, tongue coated with a thin white film, bowels a little costive, appetite poor and no history of any eruption or sore throat. From the muscular pain I diagnosed muscular rheumatism. I prescribed as follows:

℞—Hydrarg. Chlor. Mit.	gr. vi.
Sodii Bicarb.	gr. x.
M. ft. Chart.	no. ii.

Sig. One powder at 8 and 9 o'clock p. m.; to be followed by ℥ ss sulphate of magnesia next morning. Also ordered salicylate of soda 15 grains every 3 hours.

On the 6th inst., his father came to my office and reported that the stiffness and pain were relieved, but the boy was "skinning all over" as he expressed it. He had with him a piece of epidermis about two inches square. I saw the boy the next day and found that the epidermis covering the whole body was peeling off. I could pull off pieces as large as a page of ordinary note paper. Upon close examination I could not detect any inflammation or exudation, and he said there had been no eruption since I first saw him and I am sure there was none then. He said he did not itch or suffer any inconvenience from the disease. There is no history of any specific trouble in the family and the boy has always been healthy. Could this be a case of some form of Dermatitis, or was the "skinning" due to the use of Solicylate of Soda? I can not believe that it is any form of Dermatitis with which I am acquainted, from the fact there has been no redness or inflammation about the skin that I could detect. I would be pleased to have the opinion of yourself or some of your readers on the case. I enclose you a sample of the epidermis for inspection.

Yours truly,
K. G. AVERITT, M.D.

Abstracts.

Mushroom Poisoning.—Caglier (*Medical Record*, August 28, 1897) reports that a family of six persons partook sparingly of poisonous mushrooms supposed to be the *Agæricus muscaria.* Three children, all boys, aged five, eight and ten years, respectively, ate one-sixth to one-half of a mushroom for supper. The following morning they appeared somewhat sluggish, vomited after the administration of castor-oil, and suffered from mild diarrhœa with little or no pain. They died after periods of coma of varying length in 29, 40 and 80 hours after the ingestion of the mushroom. A little girl, aged four years, and her mother, each ate about one-sixth of a mushroom, and had no symptoms, except slight vomiting. The father, who ate nearly two mushrooms, presented gastro-intestinal symptoms in a marked degree, and was stupid for two days, with a moist skin, small, rapid and regular pulse, and quick, shallow breathing.

These patients, with the exception of the first boy, who died, and the little girl, were given one-fifth of a grain of sulphate of atropin every two hours. Strychnin was also administered. The pulse and respiration were improved by this treatment, but the coma was not changed. Caglieri explains the failure of the atropin to restore the patients, by the fact that it was administered thirty-six hours after the mushrooms were eaten. He regards it, nevertheless, as the best antidote for muscarin poisoning, but in another case he would give it in smaller doses, at shorter intervals.—*Medical News.*

Surgery on the Battlefield Without Anesthesia.—"It was here that I performed my first big operation, the patient being a Turkish infantryman who was brought in from Alexinatx with his knee shattered by a shell. He refused to take chloroform, and I took his leg off above the knee without any anesthetic. He never said a word and went on smoking a cigarette all the time. When the captain came round with his note-book afterwards, to take down the name, age and regiment of each wounded man, my patient answered all the questions quietly and unconcernedly while I was stitching up the flap of the skin over the stump. It was a marvellous exhibition of fortitude."

The above passage is taken from a book by Charles S. Ryan, an Australian, lately published by John Murray, London, in which the author relates his experiences as an army surgeon in the Turkish service during the campaign around Plevna in 1877. Many other instances of Turkish fortitude and of other virtues are given. The narrative is as thrilling as a Stanley Weyman or an Anthony Hope story, and, withal impresses the reader with the feeling that the incidents occurred as they are described.—*The Boston Med. and Sur. Jour.*

POULTICES IN PULMONARY DISEASES OF CHILDREN.—Dr. J. Carter (*Medicine*, November 1897) has a word to say in defense of the poultice. Many are opposed to its use because "it gets cold when allowed to remain on several hours." The *method of use* is as important in the employment of this remedy as in any other. It would be useless in many instances to look for good results from the administration of quinine once a day.

In bronchopneumonia, pneumonia, or bronchitis it is not always advisable, but is often beneficial. If the patient is poor, the apartment cold, and provisions for nursing meager, it may be better not to undertake the use of this agent. The method and circumstances are everything. Under favorable conditions —that is, under conditions where the physician's directions can be faithfully carried out—the poultice is of great value. When directions cannot be fully conformed to this agent should not be used—a rule which applies to all remedies.

In bronchopneumonia, when dyspnea is marked; in pneumonia, when pain is great; in pleurisy and bronchitis, accompanied by much distress—a hot poultice surrounding the body will often give very quick and permanent relief; but must be kept hot by frequent changing or covering with oiled silk and heating with hot-water bottles.

The failure to get good results from the use of poultices indicates a failure to observe therapeutic indications, or negligence in the method of using the remedy. The fault, then, is not with the poultice as a remedial agent, but with the method of use, or with the using it when there is some contraindication. It is no more a panacea for all pulmonary ailments than is

Dover's powder. A differential study of cases will help to determine the conditions in which this remedy is of greatest value, and will aid in restoring the poultice to its former deservedly high place in the minds of the profession, and conduce to a proper limitation of its field of usefulness. Exact therapeusis requires that a remedy be prescribed at the proper time, in a definite manner, for a known purpose. Other important local applications which require as careful and scientific use are the mustard, capsicum and spice poultice or plaster; stupes of turpentine, camphor, alcohol; jackets of spongiopiline, cotton, lamb's wool. None of these can be applied in every case indiscriminately.

Therapeutic Hints.

The Treatment of Common Colds.—Blonde (*Revue de Ther.*, August 1, 1897) recommends the following treatment for acute bronchotrachaeitis.

1. In the beginning, and only in the beginning, of the illness:

℞	Tincture of aconite root	15 drops
	Tincture of ipecac	2.5 drams
	Menthol Saccharin } aa Alcohol	1.2 grains
	Syrup of tolu	4 ounces

Two or three teaspoonfuls of this mixture are to be taken at intervals of one honr after the two principal meals of the day.

2. For the coryza one may use a powder composed of equal parts of biborate of soda, alumnol, and powdered sugar.

3. If the treatment is undertaken later two teaspoonfuls of the following mixture may be taken every two hours:

℞	Tincture of aconite root	15 drops
	Antipyrin	30 grains
	Syrup of codein	3 drams
	Syrup of polygala	5 drams
	Syrup of tolu	1 ounce
	Syrup of cherry laurel	13 drams

4. For the final period, that of expectoration, etc., turpentine, creosote, or guaiacol, may be given in capsules after each meal.—*Medical News.*

Miscellaneous Items.

We are in receipt of the initial number of *Current Thought*, Cleveland, Ohio, in the form of a quarterly journal. Heretofore the publication has been issued as paper covered books, called *Current Thought Library*. Mr. C. Elton Blanchard, the editor of this journal was formerly publisher of the *Cleveland Medical Gazette*. The medical profession will find much of interest in *Current Thought* as will any thinking man or woman.

Dr. F. W. Whitehead, formerly of Scotland Neck, N. C., has located in Suffolk, Va.

Beginning with the January issue there will be published a foreign edition of the *Laryngoscope*. This journal is published in St. Louis and is devoted to diseases of the nose, throat and ear.

The Western Medical and Surgical Gazette is the latest of the new journals to come to our table. It is edited by Drs. W. N. Beggs and Lincoln Massey at Denver, Colorado. It is full of interesting matter and is ably edited. We welcome it as a journal well worthy of abundant success.

The Georgia Journal of Medicine and Surgery gives notice that henceforth it will contain from 75 to 100 pages instead of 50 as heretofore. We are pleased to see that this execellent journal is meeting with such early success.

Dr. W. E. Warren has removed from Greenville to Stokes, N. C.

One of our subscribers in responding to our late call for our friends to come over and help us, writes that just as he signed the check an old delinquent patient who had been owing a bill over two years, came in and paid the exact amount as that for which he had just drawn his check. See what a good influence writing that check had! *Verbum sat sapienti.*

NECROLOGY.

Dr. J. Berrien Lindsley, age 75 years, at Nashville, Tenn., December 7, 1897. Dr. Lindsley was probably the most conspicuous member of the medical profession of his State. His death was due to prostration from smoke of a fire in the building adjoining his residence and of exposure while watching the efforts of the firemen. He took a deep and active interest in the educational and sanitary affairs of his State and city, and was at the time of his death secretary of the State Board of Health, which position he had held for many years. He was also a member of the Numismatic and Antiquarian Society, of Philadelphia; of the American Chemical Society; of the American Academy of music; Director of the National Prison Association; corresponding member of the National Prison Association, of France; treasurer of the American Public Health Association; fellow of the Historical Society of Lodon and America.

Dr. Lindsley was ordained to the ministry of the Presbyterian church in 1846, and ten years later had conferred upon him by the College of New Jersey, at Princeton, the degree of Doctor of Divinity. He was instrumental in having created in 1850, the Medical Department of the University of Tennessee, of which he was the first dean, and in which he held the chair of State Medicine at the time of his death.

Reading Notices.

Pepsin is undoubtedly one of the most valuable digestive agents of our Meteria Medica, provided a good article is used. Robinson's Lime Juice and Pepsin, and Arom. Fluid Pepsin, we can recommend as possessing merit of high order.

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LYSES AND REPORT BY DR. R. OGDEN DOREMUS

Professor of Chemistry in the Bellevue Hospital Medical College, New York.

NEW YORK, December 3, 1896.

. E. C. LAIRD, Resident Physician,
Buffalo Lithia Springs, Va.

ar Doctor :—

I have received the five collections of **Disintegrated Calculi**, each collection taining a number of fragments, and also the three boxes, each containing ingle Calculus, mentioned in your letter as discharged by different patients ile under treatment by the **BUFFALO LITHIA WATER, Spring No. 2.**

I have analyzed and photographed parts of each specimen, and designated m alphabetically.

One of Calculi from collection marked "A" was 5/16 of an inch in diameter, an orange color, and on section exhibited a nucleus surrounded by nine centric layers of a crystalline structure. On chemical analysis it was found consist of **Uric Acid** (colored by organic substances from the urine), with traces Ammonium Urate and Calcium Oxolate. A fragment of a broken down lculus from the same collection was found to consist of **Uric Acid.**

One of the fragments taken at random from the collection marked "B" ich was still more disintegrated than the preceding one, proved on analysis be composed chiefly of **Uric Acid** and Ammonium Urate, with a trace of lcium Oxolate.

The contents of the boxes marked "C" consisted chiefly of whitish Crystlline materials. On microscopic examination they exhibited well defined and ismatic crystals, characteristic of "Triple Phosphate." On chemical anasis they were found to consist of Magnesium and Ammonium Phosphate riple phosphate), Calcium Phosphate, Calcium Carbonate a trace, Sodium d Potossium Salts in traces, Uric Acid and Urates none, Calcium Oxolate one, Organic debris in considerable quantity, and matters foreign to Calculi.

The fragments of Calculi in the collection marked "D" were numerous, nd of sizes varying from small fragments to 7/8 inches in length, 5/16 inches in idth and 5/16 inches in thickness. Some of the fragments were white and others ere gray in color. On chemical analysis they were found to consist partly of e variety known as "Fusible Calculus," Ammonium and Magnesium Phoshate with Calcium Phosphate also, Calcium Phosphate, Calcium Carbonate in races, Calcium Oxolate in traces, Uric Acid in traces and Organic matter.

The Calculus in collection marked "E" were nodulated and nearly sphercal in shape, consisting of Crystalline layers from 3/8 to 1/4 of an inch in liameter. They were of a brown color, and on analysis were found to be chiefly Uric Acid, with some Ammonium Urate and traces of Organic matter.

Yours respectfully,

R. OGDEN DOREMUS.

Analyses F, G and H, omitted for lack of space.

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